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**The role of human, social and organizational capital in the interconnections
between knowledge workers' perception of HR practices and, their
organizational commitment and job satisfaction**

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A thesis submitted for the degree of Doctor of Philosophy

University of Bath

School of Management

February, 2011

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ABSTRACT

This thesis examines the role of human, social and organizational capital in the interconnections between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction. Earlier research has emphasized the importance of conducting thorough examinations of the HR-attitudes connection, mainly the linkages between employees' perception of HR practices and, their organizational commitment and job satisfaction (Appelbaum et al., 2000; Gerhart, 2005; Macky and Boxall, 2007; Meyer and Smith, 2000; Purcell et al., 2003, 2009; Whitener, 2001). While there is little knowledge in the literature on the function of contextual elements in the linkages between HR practices and attitudes, this thesis argues that a consideration of factors from the context within which employees operate can deepen the understanding of the influence of HR practices on workers' organizational commitment and job satisfaction. As organizations can encompass numerous contextual elements, this thesis focuses on human, social and organizational capital. While these forms of capital were rarely accounted for in HR-attitudes studies, the examination of previous research has provided some indications that seem to lead towards a possible role that these contextual factors could have in the HR-attitudes connection (Leana and Van Buren, 1999; Youndt and Snell, 2004; Youndt et al., 2004).

Since the attitudes of knowledge workers inside knowledge intensive firms appear to be vital for the success of such types of companies (Alvesson, 1995), this thesis is interested in examining the function of context, in the perception of HR practices-attitudes connection for knowledge workers employed in knowledge intensive firms. Mainly, this thesis investigates how human, social and organizational capital can impact the interconnections between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction. In reaching this objective, this thesis follows a case study strategy and a qualitative research approach. Data was primarily collected from two groups of knowledge workers who are employed in positions of key responsibility, inside two Canadian-based divisions of a multinational knowledge intensive firm.

The central outcomes of this thesis point that knowledge workers' perception of certain HR practices can indirectly influence their organizational commitment and job satisfaction, through forms of capital. This thesis highlights that the features of forms of capital inside a firm, can help shaping these indirect connections. Interestingly as well, there were limited findings in this thesis indicating that these indirect interconnections might also depend on some characteristics that knowledge worker groups could have. These outcomes can contribute towards the literature on the HR-attitudes connection. In particular, the results of this thesis can provide more knowledge into 'why' and 'how' HR practices can influence workers' attitudes.

TABLE OF CONTENTS

	Page
Title page	i
Acknowledgements	ii
Abstract	iii
Table of contents	iv
List of tables	xi
List of figures	xx
List of abbreviations	xxi
CHAPTER 1: Introduction	1
Thesis underlying principles	1
Thesis structure	6
CHAPTER 2: Perception of HR practices and, employee organizational commitment and job satisfaction	8
Introduction	8
The HR-attitudes link	9
Perception of HR practices and employee attitudes	12
Employee grouping	15
<i>Employment groups and subsystems</i>	15
<i>Perception of HR practices and attitudes of various occupational groups</i>	17
Organizational commitment	19
Job satisfaction	22
Conclusion	24
CHAPTER 3: The role of context (human, social and organizational capital) in the connection between perception of HR practices and employee attitudes	27
Introduction	27
Human, social and organizational capital	29
<i>Human capital</i>	29
<i>Social Capital</i>	30
<i>Organizational capital</i>	32
The role of human, social and organizational capital in the connection between perception of HR practices and attitudes	33
<i>The influence of perception of HR practices on human, social and organizational capital</i>	33
<i>The influence of human, social and organizational capital on organizational commitment and job satisfaction</i>	36
<i>The function of human, social and organizational capital in the perception of HR practices and attitudes connection</i>	40
Conclusion	43
CHAPTER 4: Knowledge intensive firms and knowledge workers	44
Introduction	44
Characteristics of knowledge intensive firms	45
Characteristics of knowledge workers	47

The tacit and codified types of knowledge	55
Conclusion	57
CHAPTER 5: Research Framework	58
Introduction	58
Understanding the role of human, social and organizational capital in the interconnections between knowledge workers' perception of HR practices and their attitudes: insights from previous studies	61
<i>The characteristics of human, social and organizational capital</i>	61
<i>The characteristics of knowledge workers and knowledge intensive firms</i>	63
<i>The interactions between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction</i>	65
<u><i>Knowledge workers' perception of selection and, their organizational commitment and job satisfaction</i></u>	68
<u><i>Knowledge workers' perception of compensation and, their organizational commitment and job satisfaction</i></u>	69
<u><i>Knowledge workers' perception of job security and, their organizational commitment and job satisfaction</i></u>	70
<u><i>Knowledge workers' perception of communication and, their organizational commitment and job satisfaction</i></u>	71
<u><i>Knowledge workers' perception of performance appraisal and, their organizational commitment and job satisfaction</i></u>	71
<u><i>Knowledge workers' perception of career opportunities and, their organizational commitment and job satisfaction</i></u>	72
<u><i>Knowledge workers' perception of job autonomy and, their organizational commitment and job satisfaction</i></u>	72
<u><i>Knowledge workers' perception of training and, their organizational commitment and job satisfaction</i></u>	73
<u><i>Knowledge workers' perception of work-life balance and, their organizational commitment and job satisfaction</i></u>	74
<i>The connections between knowledge workers' perception of HR practices and, human, social and organizational capital</i>	75
<u><i>The impact of knowledge workers' perception of HR practices on social capital</i></u>	76
<u><i>The impact of knowledge workers' perception of HR practices on organizational capital</i></u>	78
<u><i>The impact of knowledge workers' perception of HR practices on human capital</i></u>	78
<i>The impact of human, social and organizational capital on knowledge workers' organizational commitment and job satisfaction</i>	80
<u><i>The impact of social capital on knowledge workers' organizational commitment and job satisfaction</i></u>	81
<u><i>The impact of organizational capital on knowledge workers' organizational commitment and job satisfaction</i></u>	82
<u><i>The impact of human capital on knowledge workers' organizational commitment and job satisfaction</i></u>	83
<i>The influence of human, social and organizational capital on the interactions between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction</i>	85
Analytical framework	86
<i>The characteristics of human, social and organizational capital</i>	87
<i>The key characteristics of knowledge workers and knowledge intensive organizations</i>	88
<i>How can we explain the interactions between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction?</i>	88

<i>How can we explain the connections between knowledge workers' perception of HR practices and, human, social and organizational capital?</i>	91
<i>How can we explain the impact of human, social and organizational capital on knowledge workers' organizational commitment and job satisfaction?</i>	92
<i>Thesis main analytical steps</i>	93
Conclusion	94
 CHAPTER 6: Research Methodology	 95
Introduction	95
Research Philosophy	95
Choosing the research strategy: case study	96
Research design	98
<i>Cases selection</i>	100
<i>Unit of analysis</i>	102
<i>Qualitative approach</i>	103
<u><i>Semi-structured interviews</i></u>	104
<i>Main data collection: the two rounds of interviews</i>	105
<i>Secondary Data</i>	118
Analysis	119
Conclusion	123
 CHAPTER 7: Cases context	 124
Introduction	124
General overview of the main characteristics of SAND and AEROS	125
<i>Overview of the main characteristics of SAND</i>	125
<i>Overview of the main characteristics of AEROS</i>	126
The SAND context: human, social and organizational capital	128
<i>SAND's human capital</i>	128
<i>Characteristics of social capital in SAND</i>	129
<i>SAND's organizational capital</i>	133
The AEROS context: human, social and organizational capital	134
<i>AEROS's human capital</i>	134
<i>Characteristics of social capital in AEROS</i>	135
<i>AEROS's organizational capital</i>	138
Main characteristics of SAND and AEROS informants: education, experience and job positions	139
<i>Main characteristics of SAND's informants: education, experience and job positions</i>	139
<i>Main characteristics of AEROS's informants: education, experience and job positions</i>	141
Human resource policies and practices inside SAND and AEROS	143
<i>Selection</i>	145
<i>Training</i>	148
<i>Compensation</i>	149
<i>Performance appraisal</i>	151
<i>Career opportunities</i>	152
<i>Work-life Balance</i>	153
<i>Job autonomy</i>	153
<i>Job security</i>	154
<i>Communication</i>	154
<i>Summary of HR practices inside SAND and AEROS</i>	155
Conclusion	160

CHAPTER 8: Within-case analysis: the interconnections between perception of HR practices and knowledge workers' organizational commitment and job satisfaction	161
Introduction	161
Relationship between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction: SAND	162
Compensation	162
<u>Knowledge workers' perception of compensation in SAND</u>	162
<u>Perception of compensation and knowledge workers' organizational commitment in SAND</u>	163
<u>Perception of compensation and knowledge workers' job satisfaction in SAND</u>	167
Performance Appraisal	168
<u>Knowledge workers' perception of performance appraisal in SAND</u>	168
<u>Knowledge workers' perception of performance appraisal and organizational commitment in SAND</u>	169
<u>Knowledge workers' perception of performance appraisal and job satisfaction in SAND</u>	171
Career Opportunities	172
<u>Knowledge workers' perception of career opportunities in SAND</u>	172
<u>Knowledge workers' perception of career opportunities and organizational commitment in SAND</u>	173
<u>Knowledge workers' perception of career opportunities and job satisfaction in SAND</u>	176
Job security	180
<u>Knowledge workers' perception of job security in SAND</u>	180
<u>Knowledge workers' perception of job security and organizational commitment in SAND</u>	181
<u>Knowledge workers' perception of job security and job satisfaction in SAND</u>	183
Job autonomy	184
<u>Knowledge workers' perception of job autonomy in SAND</u>	184
<u>Knowledge workers' perception of job autonomy and organizational commitment in SAND</u>	184
<u>Knowledge workers' perception of job autonomy and job satisfaction in SAND</u>	186
Communication	187
<u>Knowledge workers' perception of communication in SAND</u>	187
<u>Knowledge workers' perception of communication and organizational commitment in SAND</u>	188
<u>Knowledge workers' perception of communication and job satisfaction in SAND</u>	189
Training	191
<u>Knowledge workers' perception of training in SAND</u>	191
<u>Knowledge workers' perception of training and organizational commitment in SAND</u>	191
<u>Knowledge workers' perception of training and job satisfaction in SAND</u>	193
Employee Selection	194
<u>Knowledge workers' perception of selection in SAND</u>	194
<u>Knowledge workers' perception of selection and organizational commitment in SAND</u>	194
<u>Knowledge workers' perception of selection and job satisfaction in SAND</u>	195
Relationship between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction: AEROS	196
Compensation	196
<u>Knowledge workers' perception of compensation in AEROS</u>	196

<u>Perception of compensation and knowledge workers' organizational commitment in AEROS</u>	197
<u>Perception of compensation and knowledge workers' job satisfaction in AEROS</u>	200
Performance Appraisal	201
<u>Knowledge workers' perception of performance appraisal in AEROS</u>	201
<u>Knowledge workers' perception of performance appraisal and organizational commitment in AEROS</u>	201
<u>Knowledge workers' perception of performance appraisal and job satisfaction in AEROS</u>	203
Career Opportunities	205
<u>Knowledge workers' perception of career opportunities in AEROS</u>	205
<u>Knowledge workers' perception of career opportunities and organizational commitment in AEROS</u>	206
<u>Knowledge workers' perception of career opportunities and job satisfaction in AEROS</u>	208
Job security	211
<u>Knowledge workers' perception of job security in AEROS</u>	211
<u>Knowledge workers' perception of job security and organizational commitment in AEROS</u>	211
<u>Knowledge workers' perception of job security and job satisfaction in AEROS</u>	213
Job autonomy	213
<u>Knowledge workers' perception of job autonomy in AEROS</u>	214
<u>Knowledge workers' perception of job autonomy and organizational commitment in AEROS</u>	214
<u>Knowledge workers' perception of job autonomy and job satisfaction in AEROS</u>	215
Communication	216
<u>Knowledge workers' perception of communication in AEROS</u>	216
<u>Knowledge workers' perception of communication and organizational commitment in AEROS</u>	217
<u>Knowledge workers' perception of communication and job satisfaction in AEROS</u>	218
Training	219
<u>Knowledge workers' perception of training in AEROS</u>	219
<u>Knowledge workers' perception of training and organizational commitment in AEROS</u>	220
<u>Knowledge workers' perception of training and job satisfaction in AEROS</u>	221
Employee Selection	221
<u>Knowledge workers' perception of selection in AEROS</u>	221
<u>Knowledge workers' perception of selection and organizational commitment in AEROS</u>	222
<u>Knowledge workers' perception of selection and job satisfaction in AEROS</u>	222
Conclusion	223
 CHAPTER 9: The role of human, social and organizational capital in the interconnections between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction	 224
Introduction	224
The role of human, social and organizational capital in the interconnections between perception of HR practices and, organizational commitment and job satisfaction: SAND	226
<u>The impact of perception of HR practices on human, social and organizational capital: SAND</u>	226
<u>The impact of perception of HR practices on human capital: SAND</u>	226
<u>The impact of perception of HR practices on social capital: SAND</u>	228

<i>The impact of perception of HR practices on organizational capital: SAND</i>	232
The impact of human, social and organizational capital on, organizational commitment and job satisfaction: SAND	234
<i>The impact of social capital on organizational commitment: SAND</i>	234
<i>The impact of social capital on job satisfaction: SAND</i>	238
<i>The impact of organizational capital on organizational commitment and job satisfaction: SAND</i>	241
<i>The impact of human capital on organizational commitment and job satisfaction: SAND</i>	245
The role of human, social and organizational capital in the interconnections between perception of HR practices and organizational commitment and job satisfaction: AEROS	247
<i>The impact of perception of HR practices on human, social and organizational capital: AEROS</i>	248
<i>The impact of perception of HR practices on human capital: AEROS</i>	248
<i>The impact of perception of HR practices on social capital: AEROS</i>	250
<i>The impact of perception of HR practices on organizational capital: AEROS</i>	253
The impact of human, social and organizational capital on organizational commitment and job satisfaction: AEROS	255
<i>The impact of organizational capital on organizational commitment: AEROS</i>	255
<i>The impact of organizational capital on job satisfaction: AEROS</i>	260
<i>The impact of social capital on organizational commitment and job satisfaction: AEROS</i>	263
<i>The impact of human capital on organizational commitment and job satisfaction: AEROS</i>	267
Conclusion	268
CHAPTER 10: Cross-Case Examination	270
Introduction	270
The interconnections between informants' perception of HR practices and, their organizational commitment and job satisfaction: SAND and AEROS	271
<i>Link between perception of compensation and, organizational commitment and job satisfaction</i>	271
<i>Link between perception of performance appraisal and, organizational commitment and job satisfaction</i>	275
<i>Link between perception of career opportunities and, organizational commitment and job satisfaction</i>	277
<i>Link between perception of job security and, organizational commitment and job satisfaction</i>	281
<i>Link between perception of job autonomy and, organizational commitment and job satisfaction</i>	283
<i>Link between perception of communication and, organizational commitment and job satisfaction</i>	285
<i>Link between perception of training and, organizational commitment and job satisfaction</i>	287
<i>Link between perception of employee selection and, organizational commitment and job satisfaction</i>	289
The role of human, social, and organizational capital in the interconnections between informants' perception of HR practices and, their organizational commitment and job satisfaction: SAND and AEROS	290
<i>The impact of perception of HR practices on social, organizational and human capital</i>	293
<i>Link between perception of HR practices and social capital</i>	293
<i>Link between perception of HR practices and organizational capital</i>	297

<i>Link between perception of HR practices and human capital</i>	299
The interconnections between forms of capital and, organizational commitment and job satisfaction	300
<i>Link between social capital and, organizational commitment and job satisfaction</i>	300
<i>Link between organizational capital and, organizational commitment and job satisfaction</i>	304
<i>Link between human capital and, organizational commitment and job satisfaction</i>	309
Conclusion	310
CHAPTER 11: Overall Analysis	311
Introduction	311
The impact of knowledge workers' perception of HR practices on their organizational commitment and job satisfaction	312
The influence of human, social and organizational capital on the interconnections between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction	318
<i>The impact of knowledge workers' perception of HR practices on human, social and organizational capital</i>	320
<i>The impact human, social and organizational capital on knowledge workers' organizational commitment and job satisfaction</i>	323
Summary of findings	327
Conclusion	328
CHAPTER 12: Implications and conclusion	330
Introduction	330
Implications for theory	330
Implications for methods	337
Implications for practice	338
Limitations	339
Conclusion	342
APPENDIX A	344
REFERENCES	358

LIST OF TABLES

Table 5.1: The expected connections between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction – without accounting for the role of human, social and organizational capital.	Page 68
Table 5.2: The impact of knowledge workers' perception of HR practices on human, social and organizational capital	76
Table 5.3: The impact of human, social and organizational capital on knowledge workers' organizational commitment and job satisfaction	81
Table 6.1: Central questions from 1 st meeting with senior management	106
Table 6.2: Key questions from 2 nd senior management meeting	107
Table 6.3: Central questions asked on human capital and HRM in senior management meetings	108
Table 6.4: Distribution of informants' gender, age, experience, tenure and education	109
Table 6.5: First round knowledge workers' interview questions	115
Table 6.6: Main questions included in the schedule for the 2nd round of knowledge workers' interviews	118
Table 7.1: Definition of key codes used in the analysis of the main features of social capital in SAND and AEROS	130
Table 7.2: Frequencies of key codes used in the analysis of the main features of social capital in SAND	132
Table 7.3: Frequencies of key codes used in the analysis of the main features of social capital in AEROS	136
Table 7.4: Positions of formal responsibility over key factors in SAND and AEROS	141
Table 7.5: Summary of the HR practices present inside SAND and AEROS	158
Table 8.1: Key codes used in the analysis of the linkages between informants' perception of compensation and their organizational commitment	164

Table 8.2: Frequencies of key codes used in the analysis of the linkages between SAND informants' perception of compensation and their organizational commitment	165
Table 8.3: Key codes used in the analysis of the linkages between perception of compensation and job satisfaction	167
Table 8.4: Frequency of key codes used in the analysis of the linkages between perception of compensation and job satisfaction, in SAND	167
Table 8.5: Key codes used in the analysis of the linkages between perception of performance appraisal practice and organizational commitment, in SAND	169
Table 8.6: Frequency of key codes used in the analysis of the linkages between perception of performance appraisal practice and organizational commitment, in SAND	170
Table 8.7: Key codes used in the analysis of the linkages between perception of performance appraisal practice and job satisfaction, in SAND	171
Table 8.8: Frequency of key codes used in the analysis of the linkages between perception of performance appraisal practice and job satisfaction, in SAND	171
Table 8.9: Key codes used in the analysis of the linkages between perception of career opportunities practice and organizational commitment	174
Table 8.10: Frequency of key codes used in the analysis of the linkages between perception of career opportunities practice and organizational commitment, in SAND	175
Table 8.11: Key codes used in the analysis of the linkages between perception of career opportunities practice and job satisfaction	177
Table 8.12: Frequency of key codes used in the analysis of the linkages between perception of career opportunities practice and job satisfaction, in SAND	178
Table 8.13: Key codes used in the analysis of the linkages between perception of job security practice and organizational commitment	181
Table 8.14: Frequency of key codes used in the analysis of the linkages between perception of job security practice and organizational commitment, in SAND	182

Table 8.15: Key codes used in the analysis of the linkages between perception of job security practice and job satisfaction	183
Table 8.16: Frequency of key codes used in the analysis of the linkages between perception of job security practice and job satisfaction, in SAND	183
Table 8.17: Key codes used in the analysis of the linkages between perception of job autonomy practice and organizational commitment	184
Table 8.18: Frequency of key codes used in the analysis of the linkages between perception of job autonomy practice and organizational commitment, in SAND	185
Table 8.19: Key codes used in the analysis of the linkages between perception of job autonomy practice and job satisfaction	186
Table 8.20: Frequency of key codes used in the analysis of the linkages between perception of job autonomy practice and job satisfaction, in SAND	186
Table 8.21: Key codes used in the analysis of the linkages between perception of communication practice and organizational commitment	188
Table 8.22: Frequency of key codes used in the analysis of the linkages between perception of communication practice and organizational commitment, in SAND	188
Table 8.23: Key codes used in the analysis of the linkages between perception of communication practice and job satisfaction	189
Table 8.24: Frequency of key codes used in the analysis of the linkages between perception of communication practice and job satisfaction, in SAND	190
Table 8.25: Key codes used in the analysis of the linkages between perception of training practice and organizational commitment	192
Table 8.26: Frequency of key codes used in the analysis of the linkages between perception of training practice and organizational commitment, in SAND	192
Table 8.27: Key codes used in the analysis of the linkages between perception of training practice and job satisfaction	193
Table 8.28: Frequency of key codes used in the analysis of the linkages between perception of training practice and job satisfaction, in SAND	193

Table 8.29: Key code used in the analysis of the linkages between perception of selection practice and organizational commitment	194
Table 8.30: Frequency of key code used in the analysis of the linkages between perception of selection practice and organizational commitment, in SAND	195
Table 8.31: Key code used in the analysis of the linkages between perception of selection practice and job satisfaction	195
Table 8.32: Frequency of key code used in the analysis of the linkages between perception of selection practice and job satisfaction, in SAND	195
Table 8.33: Frequencies of key codes used in the analysis of the interconnection between perception of compensation practice and organizational commitment, in AEROS	198
Table 8.34: Frequency of key codes used in the analysis of the linkages between perception of compensation and job satisfaction in AEROS	200
Table 8.35: Key codes used in the analysis of the linkages between perception of performance appraisal practice and organizational commitment, in AEROS	202
Table 8.36: Frequency of key codes used in the analysis of the linkages between perception of performance appraisal practice and organizational commitment, in AEROS	202
Table 8.37: Key codes used in the analysis of the linkages between perception of performance appraisal practice and job satisfaction, in AEROS	204
Table 8.38: Frequency of key codes used in the analysis of the linkages between perception of performance appraisal practice and job satisfaction, in AEROS	204
Table 8.39: Frequency of key codes used in the analysis of the linkages between perception of career opportunities practice and organizational commitment, in AEROS	207
Table 8.40: Frequency of key codes used in the analysis of the linkages between perception of career opportunities practice and job satisfaction, in AEROS	209
Table 8.41: Frequency of key codes used in the analysis of the linkages between perception of job security practice and organizational commitment, in AEROS	212

Table 8.42: Frequency of key codes used in the analysis of the linkages between perception of job security practice and job satisfaction, in AEROS	213
Table 8.43: Frequency of key codes used in the analysis of the linkages between perception of job autonomy practice and organizational commitment, in AEROS	214
Table 8.44: Frequency of key codes used in the analysis of the linkages between perception of job autonomy practice and job satisfaction, in AEROS	215
Table 8.45: Frequency of key codes used in the analysis of the linkages between perception of communication practice and organizational commitment, in AEROS	217
Table 8.46: Frequency of key codes used in the analysis of the linkages between perception of communication practice and job satisfaction, in AEROS	218
Table 8.47: Frequency of key codes used in the analysis of the linkages between perception of training practice and organizational commitment, in AEROS	220
Table 8.48: Frequency of key codes used in the analysis of the linkages between perception of training practice and job satisfaction, in AEROS	221
Table 8.49: Frequency of key code used in the analysis of the linkages between perception of selection practice and organizational commitment, in AEROS	222
Table 8.50: Frequency of key code used in the analysis of the linkages between perception of selection practice and job satisfaction, in AEROS	223
Table 9.1: Key code used in the analysis of the interconnections between perception of HR practices and human capital in SAND	227
Table 9.2: Frequency of a key code used in the analysis of the interconnections between perception of HR practices and human capital in SAND	227
Table 9.3: Key codes used in the analysis of the interconnections between perception of HR practices and social capital in SAND	229
Table 9.4: Frequency of key codes used in the analysis of the interconnections between perception of HR practices and social capital in SAND	230
Table 9.5: Key codes used in the analysis of the interconnections between perception of HR practices and organizational capital in SAND	233

Table 9.6: Frequency of a key code used in the analysis of the interconnections between perception of HR practices and organizational capital in SAND	233
Table 9.7: Key codes used in the analysis of the interconnection between social capital and organizational commitment, in SAND	235
Table 9.8: Frequency of key codes used in the analysis of the interconnection between social capital and organizational commitment, in SAND	236
Table 9.9: Key codes used in the analysis of the interconnection between social capital and job satisfaction, in SAND	239
Table 9.10: Frequency of key codes used in the analysis of the interconnection between social capital and job satisfaction, in SAND	240
Table 9.11: Key codes used in the analysis of the interconnections between organizational capital and, organizational commitment and job satisfaction, in SAND	242
Table 9.12: Frequency of key codes used in the analysis of the interconnections between organizational capital and, organizational commitment and job satisfaction, in SAND	243
Table 9.13: Key code used in the analysis of the interconnections between human capital and, organizational commitment and job satisfaction, in SAND	246
Table 9.14: Frequency of key code used in the analysis of the interconnections between human capital and, organizational commitment and job satisfaction, in SAND	246
Table 9.15: Key code used in the analysis of the interconnections between perception of HR practices and human capital in AEROS	248
Table 9.16: Frequency of a key code used in the analysis of the interconnections between perception of HR practices and human capital in AEROS	249
Table 9.17: Key codes used in the analysis of the interconnections between perception of HR practices and social capital in AEROS	251
Table 9.18: Frequency of key codes used in the analysis of the interconnections between perception of HR practices and social capital in AEROS	251

Table 9.19: Key code used in the analysis of the interconnections between perception of HR practices and organizational capital in AEROS	253
Table 9.20: Frequency of a key code used in the analysis of the interconnection between perception of HR practices and organizational capital in AEROS	254
Table 9.21: Key codes used in the analysis of the interconnection between organizational capital and organizational commitment, in AEROS	256
Table 9.22: Frequency of key codes used in the analysis of the interconnection between organizational capital and organizational commitment, in AEROS	257
Table 9.23: Key codes used in the analysis of the interconnection between organizational capital and job satisfaction, in AEROS	261
Table 9.24: Frequency of key codes used in the analysis of the interconnection between organizational capital and job satisfaction, in AEROS	262
Table 9.25: Key codes used in the analysis of the interconnections between social capital and, organizational commitment and job satisfaction, in AEROS	264
Table 9.26: Frequency of key codes used in the analysis of the interconnections between social capital and, organizational commitment and job satisfaction, in AEROS	265
Table 9.27: Key code used in the analysis of the interconnections between human capital and, organizational commitment and job satisfaction, in AEROS	267
Table 9.28: Frequency of key code used in the analysis of the interconnections between human capital and, organizational commitment and job satisfaction, in AEROS	268
Table 10.1: Comparing (between SAND and AEROS) the frequency of key codes used in the analysis of the connection between perception of compensation and organizational commitment	272
Table 10.2: Comparison (between SAND and AEROS) of key codes used in the analysis of the link between perception of compensation and job satisfaction	274
Table 10.3: Comparison (between SAND and AEROS) of the frequency of key codes used in the analysis of the link between perception of performance appraisal and organizational commitment	275

Table 10.4: Comparison (between SAND and AEROS) of the frequency of key codes used in the analysis of the link between perception of performance appraisal and job satisfaction	276
Table 10.5: Comparison (between SAND and AEROS) of the frequency of key codes used in the analysis of the link between perception of career opportunities and organizational commitment	278
Table 10.6: Comparison of the frequency of key codes (between SAND and AEROS) used in the analysis of the link between perception of career opportunities and job satisfaction	280
Table 10.7: Comparison (between SAND and AEROS) of the frequency of key codes used in the analysis of the link between perception of job security and organizational commitment	282
Table 10.8: Comparison (between SAND and AEROS) of the frequency of key codes used in the analysis of the link between perception of job security and job satisfaction	283
Table 10.9: Comparison (between SAND and AEROS) of the frequency of key codes used in the analysis of the link between perception of job autonomy and organizational commitment	284
Table 10.10: Comparison (between SAND and AEROS) of the frequency of key codes used in the analysis of the link between perception of job autonomy and job satisfaction	285
Table 10.11: Comparison (between SAND and AEROS) of the frequency of key codes used in the analysis of the link between perception of communication and organizational commitment	286
Table 10.12: Comparison (between SAND and AEROS) of the frequency of key codes used in the analysis of the link between perception of communication and job satisfaction	286
Table 10.13: Comparison of the frequency of key codes (between SAND and AEROS) used in the analysis of the link between perception of training and organizational commitment	287
Table 10.14: Comparison (between SAND and AEROS) of the frequency of key codes used in the analysis of the link between perception of training and job satisfaction	288
Table 10.15: Comparison (between SAND and AEROS) of the frequency of a key code used in the analysis of the link between perception of selection and organizational commitment	289

Table 10.16: Comparison (between SAND and AEROS) of the frequency of a key code used in the analysis of the link between perception of selection and job satisfaction	289
Table 10.17: Comparison (between SAND and AEROS) of the frequency of key codes used in the analysis of the link between perception of HR practices and social capital	294
Table 10.18: Comparison of the frequency of key codes (between SAND and AEROS) used in the analysis of the link between perception of HR practices and organizational capital	297
Table 10.19: Comparison (between SAND and AEROS) of the frequency of key codes used in the analysis of the link between perception of HR practices and human capital	299
Table 10.20: Comparison (between SAND and AEROS) of the frequency of key codes used in the analysis of the links between social capital and, organizational commitment and job satisfaction	301
Table 10.21: Comparison (between SAND and AEROS) of the frequency of key codes used in the analysis of the link between organizational capital and, organizational commitment and job satisfaction	306

LIST OF FIGURES

	Page
Figure 2.1: Understanding the HR-attitudes connection	12
Figure 3.1: The role of human, social and organizational capital in the connection between perception of HR practices and, commitment and job satisfaction	41
Figure 5.1: The interconnections between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction – without accounting for the role of human, social and organizational capital	67
Figure 5.2: The impact of knowledge workers' perception of HR practices on their, organizational commitment and job satisfaction – through forms of capital	85
Figure 5.3: Secondary research questions: expected links based on earlier research	90
Figure 11.1: The impact of knowledge workers' perception of HR practices on their organizational commitment and job satisfaction – comparing links found in SAND and AEROS with the anticipated connections in chapter 5	313
Figure 11.2: The impact of knowledge workers' perception of HR practices on their organizational commitment and job satisfaction, through forms of capital – comparing the links found in SAND and AEROS with the anticipated connections from chapter 5	319

LIST OF ABBREVIATIONS

AMO: Ability, Motivation and Opportunity

HR: Human Resource

HRM: Human Resource Management

IT: Information Technology

KIF: Knowledge Intensive Firm

LTIP: Long-term Incentive Plan

CHAPTER 1

Introduction

1.1 Thesis underlying principles

Earlier studies in human resource management have highlighted the significance of the HR-attitudes connection by positing that HRM can impact organizational outcomes through its influence on workers' attitudes (Appelbaum et al., 2000; Macky and Boxall, 2007; Meyer and Smith, 2000; Purcell et al., 2003, 2009). Predominantly, scholars have emphasized the importance of the connection between HRM and, workers' organizational commitment and job satisfaction (Appelbaum et al., 2000; Chang, 2005; Gerhart, 2005; Macky and Boxall, 2007; Purcell et al., 2003; Whitener, 2001). The central premise behind this emphasis lies in research evidence linking organizational commitment and job satisfaction to organizational citizenship behaviour, which is a construct that was demonstrated to be positively associated with enhanced levels of organizational performance (Appelbaum et al., 2000; Coyle-Shapiro et al., 2004; Macky and Boxall, 2007; Purcell et al., 2003).

However, whilst a growing number of scholars have studied the linkages between human resource management and, employees' organizational commitment and job satisfaction (Chang, 2005; Gould-Williams, 2004; Kinnie et al., 2005; Macky and Boxall, 2007; Meyer and Smith, 2000; Purcell et al., 2003, 2009; Whitener, 2001; Wright and Kehoe, 2008), it seems that additional research is needed in order to have a more thorough understanding of 'why' and 'how' these connections could exist (Chang, 2005; Meyer and Smith, 2000; Purcell et al., 2003, 2009). This thesis aims at contributing to the HR-attitudes literature by attempting to provide more knowledge into 'why' and 'how' human resource management can be connected to employees' organizational commitment and job satisfaction.

In their conceptualizations on the linkages between HRM and workers' attitudes, scholars have claimed that these connections could be more thoroughly understood when researchers distinguish between intended HR policies and actual HR practices (Guest et al., 2004; Kinnie et al., 2005; Wright and Nishii, 2004). In turn, studies have posited that the influence of HR practices on employees'

organizational commitment and job satisfaction can be more carefully investigated when scholars account for workers' perception of the human resource practices that are directed towards them (Chang, 1999, 2005; Gartner and Nollen, 1989; Gould-Williams, 2004; Kinnie et al., 2005; Macky and Boxall, 2007; Meyer and Smith, 2000; Purcell et al., 2003, 2009; Wright and Nishii, 2004). Accordingly, it seems that more in-depth insights onto the interconnections between HRM and workers' organizational commitment and job satisfaction, could be obtained if research examines the impact of employees' perception of HR practices on these attitudinal outcomes (Chang, 2005; Purcell et al., 2003). Nonetheless, whereas earlier studies have emphasized the significance of examining employees' perception of HR practices when researching the HR-attitudes link, most scholars seem to assume that all workers would react in similar manners to human resource practices. Yet, this assumption might be problematic for researchers who are attempting to study the influence of HR practices on workers' attitudes. This is because dissimilar employee groups seem to require different HR configurations (Lepak and Snell, 1999, 2002, 2007). Moreover, a few authors have offered some evidence indicating that worker groupings with diverging characteristics can have different reactions to HR practices (Kinnie et al., 2005; Purcell et al., 2009). Therefore, it seems that a more appropriate and in-depth understanding of the influence of perception of HR practices on attitudes appears to require that researchers account for the attributes of worker clusters.

Interestingly, worker groups' features could represent examples of contextual influences – as context could refer to aspects pertinent to employees and, the organizational setting and environment within which these employees are operating (Clinebell and Shadwick, 2005; Rousseau, 1978). Therefore, if the characteristics of worker groups could affect the HR-attitudes connection (Kinnie et al., 2005; Purcell et al., 2009), then it might be that the features of contextual elements could have an influence on these linkages. Support for such a claim could be found in the literature on the HR-performance connection. Scholars in this area are now positing that the attributes of elements from the organizational context can influence the HR-performance connection (Becker and Huselid, 2006; Michie and West, 2004). Accordingly, as the impact of HR practices on a company's performance can occur through employees' attitudes (Arthur, 1994; Boxall and Purcell, 2003; Gerhart,

2004; Wood and de Menezes, 1998; Wright and Nishii, 2004), it might be that context could also influence the linkages between HR practices and workers' attitudes. However, while scholars have offered some important insights into 'why' and 'how' HRM can be connected to attitudes, there are few studies that have accounted for the function that contextual elements could have in the HR-attitudes link. Whereas there is some knowledge in the literature on the role of employee groups' characteristics (Kinnie et al., 2005; Purcell et al., 2009), the attributes of factors from the context of the firms within which workers operate were somewhat neglected in earlier research on the HR-attitudes connection. Nonetheless, if contextual elements could have a role in the HR-attitudes link, then it could be argued that a consideration of factors from the context of the organizations where employees are working can deepen the understanding of the impact of HR practices on attitudes. If the features of contextual factors from a worker group's employing firm can affect the impact of HR practices on its attitudes, then the HR-attitudes link for this grouping might be shaped by both, the attributes of this group and the characteristics of contextual elements in the company where this group is operating.

As this thesis aims at contributing towards the literature on the HR-attitudes connection (mainly, 'why' and 'how' human resource management could influence employees' organizational commitment and job satisfaction), and while a consideration of elements from the context of organizations where workers operate might add to the body of knowledge on this link, this thesis is interested in understanding how such contextual factors can affect the interactions between human resource management and, workers' organizational commitment and job satisfaction. In particular, as scholars are emphasizing the importance of accounting for workers' perception of HR practices in thorough examinations of the impact of HRM on attitudes (Chang, 1999, 2005; Gartner and Nollen, 1989; Gould-Williams, 2004; Kinnie et al., 2005; Macky and Boxall, 2007; Meyer and Smith, 2000; Purcell et al., 2003, 2009; Wright and Nishii, 2004), this thesis attempts to study how elements from the context of organizations could affect the linkages between employees' perception of HR practices and their attitudes (organizational commitment and job satisfaction). Whilst there could be numerous factors in the context of firms where employees operate, this thesis focuses on investigating three

contextual elements: human, social and organizational capital. Earlier studies posit that these forms of capital can be affected by HR practices (Kang et al., 2007; Leana and Van Buren, 1999; Youndt and Snell, 2004; Youndt et al., 2004). Furthermore, the examination of previous research appears to offer some indications that lead to argue that human, social and organizational capital can perhaps have an impact on employees' organizational commitment and job satisfaction (Leana and Van Buren, 1999; Nahapiet and Ghoshal, 1998; Purcell et al., 2009). Therefore, these contextual factors might have a function in between HR practices and workers' attitudes. However, very few studies have accounted for human, social and organizational capital when studying the influence of HR practices on attitudes.

Specifically, this thesis aims at investigating how human, social and organizational capital can affect the interconnections between perception of HR practices and attitudes inside knowledge intensive firms. This is because the attitudes of core employees in KIFs appear to have a vital function in the success and competitiveness of these companies (Alvesson, 1995, 2000; Deetz, 1995). This thesis examines the HR-attitudes link for these core employees, that generally form the majority of the workforce in knowledge intensive organizations; and that are commonly defined in the literature as 'knowledge workers' (Alvesson, 1995, 2000; Deetz, 1995; Frenkel et al., 1995; Hislop, 2008). Whereas knowledge workers can be occupying various positions inside a firm, this thesis examines knowledge workers in positions of key responsibility – formal responsibility over key factors inside project teams and/or work divisions. There is not enough knowledge about the HR-attitudes link of knowledge workers in such positions and yet, these employees could potentially play significant functions inside knowledge intensive organizations.

In addressing its central objective this thesis asks the subsequent main research question:

How does human, social and organizational capital influence the interactions between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction?

In answering its primary research question this thesis attempts to address the following secondary questions:

How can we explain the interactions between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction?

How can we explain the connections between knowledge workers' perception of HR practices and, human, social and organizational capital?

How can we explain the impact of human, social and organizational capital on knowledge workers' organizational commitment and job satisfaction?

As the key purpose of this thesis is to explain how context can influence the linkages between perception of HR practices and attitudes, this thesis follows a case study strategy and a qualitative research approach (Miles and Huberman, 1994; Yin, 1994, 2003). Predominantly, it examines two groups of knowledge workers employed inside two Canadian divisions of a multinational knowledge intensive firm. The first group is specialized in information technology and operates in a division that provides information systems services. As for the second group it is specialized in a specific aerospace domain and operates in a division that designs particular aerospace products. These workers occupied positions of key responsibility inside their respective divisions (i.e. formal responsibility over key factors within projects or programs: such as project manager, project engineer, business development manager, test manager etc.).

The findings of this thesis indicate that, in both studied divisions, informants' perception of some HR practices seems to directly influence their organizational commitment and job satisfaction. The central characteristics of these two groups of workers appear to have helped shaping these direct interconnections. Interestingly however, the key outcomes of this thesis point that, inside the two examined divisions, informants' perceptions of a number of HR practices can indirectly influence their organizational commitment and job satisfaction, through the effect of these perceptions on certain forms of capital. The results indicate that the features of forms of capital that are present inside each of the studied divisions can help shaping these indirect linkages. Furthermore, there was some evidence in the data (while

limited) pointing that the attributes of the two groups of informants can as well, have an influence on these indirect connections.

In conclusion, the key outcomes of this thesis can add to the literature on the HR-attitudes link. Particularly, towards the body of knowledge into ‘why’ and ‘how’ HR practices can impact workers’ organizational commitment and job satisfaction. After presenting this thesis underlying principles, the next section provides the structure of this thesis.

1.2. Thesis structure

The subsequent chapters of this thesis are structured around its key purpose and research questions. As this thesis is examining the HR-attitudes connection, chapter 2 presents a review of the literature pertinent to the impact of human resource management on employee attitudes; mainly organizational commitment and job satisfaction. Following that, as this thesis is interested in studying the role of human, social and organizational capital within employees’ perception of HR practices and attitudes, chapter 3 uses earlier studies in order to define and elaborate on the features of these forms of capital. As well, chapter 3 discusses previous research pertinent to this possible function of these contextual elements. Subsequently, in order to help in understanding the attributes of the employee group and setting that this thesis is studying, chapter 4 expands on literature related to the characteristics of knowledge workers and knowledge intensive firms. Chapter 5 then outlines the research framework of this thesis. This chapter starts by reintroducing the theoretical background behind this thesis’s key objective. Following that, it attempts to answer this thesis research questions through a comprehensive description of earlier research discussed in chapters 2, 3 and 4. Chapter 5 then concludes by presenting the main analytical steps that are conducted in this thesis in order to further address its research questions. After highlighting this thesis research framework and key analytical steps, chapter 6 elaborates on the research methodology that is adopted by this thesis and, chapter 7 helps informing the case analysis chapters by presenting the characteristics of the studied cases and the features of informants in these cases. Then, according to the analytical framework illustrated in chapter 5 and, using the

collected data as well as previous research from chapters 2, 3, and 4, the following chapters present the within-case analysis and a cross-examination of main themes from the studied cases. Particularly, Chapter 8 provides the within-case analysis of the connections between perception of HR practices and the attitudes of informants for each studied case. In turn, chapter 9 provides the within-case analysis of the role of human, social and organizational capital in between perception of HR practices and attitudes of informants in the examined cases. Chapter 10 subsequently, presents a cross-case examination of the data presented in chapters 8 and 9, in order to assist in reaching this thesis outcomes and conclusions. Following the within-case and cross-case analysis, Chapter 11 then offers an overall and comprehensive representation of this thesis's main findings and, contrasts these outcomes with the expected connections and previous research that were described in chapter 5. In the end, chapter 12 concludes this thesis by providing its key contribution to the literature and its implication for methods and practice.

CHAPTER 2

Perception of HR practices and, employee organizational commitment and job satisfaction

2.1. Introduction

This episode is the first in a series of chapters (chapters 2, 3, 4 and 5) that present and discuss previous studies pertinent to this thesis main objective. Chapter 2 reviews earlier research on the HR-attitudes connection, in order to present the current knowledge that studies have on this link and, to identify any possible gaps in the literature. Following this, Chapter 3 narrows down on an area that the HR-attitudes literature seems to have provided little knowledge about and that represents the key aim of this thesis: the role of contextual factors in the influence of HR practices on employee attitudes. Chapter 3 primarily focuses on the function of human, social and organizational capital in the impact of HR practices on workers' attitudes. Subsequently, as this thesis is interested in studying the role of forms of capital in the HR-attitudes connection for knowledge workers inside knowledge intensive firms, chapter 4 presents earlier studies on this employee group and these types of organizations. Moreover, this chapter discusses previous studies that have provided insights pertinent to the HR-attitudes link for knowledge workers. Chapter 5 then outlines the research framework of this thesis. It first starts by recapitulating on the theoretical background behind the purpose of this thesis. Chapter 5 then attempts to answer this thesis research questions by comprehensively discussing main topics presented in the previous literature review chapters. This chapter concludes by highlighting the analytical steps used in this thesis in order to further address its research questions.

As indicated in the above paragraph, the purpose of this chapter is to discuss previous research related to the HR-attitudes connection (Chang, 2005; Gould-Williams, 2004; Kinnie et al., 2005; Macky and Boxall, 2007; Meyer and Smith, 2000; Purcell et al., 2003, 2009; Whitener, 2001). It starts by emphasizing on the need to examine the HR-attitudes link and mainly, on the necessity of understanding 'why' and 'how' HRM can be connected with workers' organizational commitment

and job satisfaction (Appelbaum et al., 2000; Gerhart, 2005; Macky and Boxall, 2007; Purcell et al., 2003; Whitener, 2001). The chapter then presents key points from previous research, which provide important insights that can assist in the understanding of ‘why’ and ‘how’ human resource management can be linked to employee attitudes. Primarily, it indicates that the investigation of the impact of employees’ perception of implemented HR practices on their organizational commitment and job satisfaction, can greatly help in the in-depth understanding of the HR-attitudes link (Chang, 1999, 2005; Gartner and Nollen, 1989; Gould-Williams, 2004; Kinnie et al., 2005; Macky and Boxall, 2007; Meyer and Smith, 2000; Purcell et al., 2003, 2009; Wright and Nishii, 2004). Moreover, the chapter emphasizes on the importance of accounting for employee groups’ characteristics when studying the impact of perception of HR practices on work attitudes (Kinnie et al., 2005; Lepak and Snell, 1999; Purcell et al., 2009). As research is highlighting the significance of examining the influence of HR practices on workers’ organizational commitment and job satisfaction, the chapter then defines these two attitudinal constructs (Allen and Meyer, 1990; Bridges and Harrison, 2003; Buitendach and De Witte, 2005; Hirschfeld, 2000; Judge et al., 2001; Locke, 1976; Meyer and Allen, 1997; Mowday et al. 1982; Swailes, 2002). In conclusion, a recapitulation of the central points and gaps that exist in the HR-attitudes literature is presented.

2.2. The HR-attitudes link

Human resource management began to have noticeable theoretical attention throughout the 1980s, mainly in studies conducted on U.S. companies adopting relatively complex people management activities (Beer et al., 1984; Fombrun et al., 1984). Generally, the term human resource management is understood as one that ‘includes the firm’s work systems and its models of employment’. ‘It embraces both individual and collective aspects of people management [and] is not restricted to one style or ideology’ (Boxall and Purcell, 2003, p.23). Early studies in the human resource management field were mainly interested in the functional aspect of HRM and the selection of HR policies and/or practices for the purpose of managing the workforce (Boselie et al., 2005; Wright and Boswell, 2002). Around the early 1990s, researchers’ interest in the strategic aspect of HRM has increased and substantial empirical evidence supporting linkages between human resource management and organizational outcomes began to emerge (Arthur, 1994; Becker and Gerhart, 1996;

Boxall and Steeneveld, 1999; Delaney and Huselid, 1996; Delery and Doty, 1996; Guest et al., 2003; Guest and Hoque, 1994; Huselid, 1995; Ichniowski et al., 1997; Kalleberg and Moody, 1994; MacDuffie, 1995; Purcell, 1999; Snell and Youndt, 1995). The examination of the HRM literature at the organizational level exhibits that human resource management can enhance a firm's effectiveness and performance by the means of 'high commitment' HRM – rather than the more traditional 'control' HR systems, which aim at decreasing labour cost and increasing work effectiveness by imposing strict job regulations (Godard, 2004; Macky and Boxall, 2007; Purcell et al., 2003). The main premise of performance being directly or indirectly presumed in 'high commitment' studies is the AMO theory – which stands for Ability, Motivation and Opportunity (Boxall and Purcell, 2003; Gerhart, 2004). The AMO posits that in order to enhance organizational performance, human resource management must provide employees with the ability to perform the work, the motivation to do a good job and the opportunity to fully utilize their knowledge and capabilities when performing their jobs (Boxall and Purcell, 2003). This implies that 'high commitment' HRM can enhance organizational performance through its impact on a company's workforce (Arthur, 1994; Wood and de Menezes, 1998; Wright and Nishii, 2004).

Therefore, as 'high commitment' HRM has been claimed to impact performance through its influence on employees, the effect of human resource management on the workforce and particularly, workers' reactions to HRM can represent an important area for investigation (Boselie et al., 2005; Chang, 2005; Godard, 2001; Grant and Shields, 2002; Guest, 1999; Hoque, 1999; Macky and Boxall, 2007; Purcell et al., 2003, 2009; Tsui et al., 1997). In that regard, Grant and Shields (2002) state that it is essential to understand the employees as the central receivers of HRM. Specifically, scholars have emphasized the significance of understanding the influence of HRM on workers' attitudes – mainly, organizational commitment and job satisfaction (Appelbaum et al., 2000; Gerhart, 2005; Macky and Boxall, 2007; Purcell et al., 2003; Whitener, 2001). The central premise behind the interest in studying organizational commitment and job satisfaction is related to the increasing number of research evidence pointing towards connections between these attitudinal outcomes and organizational citizenship behaviour – which is a variable that has commonly been linked to higher levels of organizational performance

(Appelbaum et al., 2000; Coyle-Shapiro et al., 2004; Purcell et al., 2003). In addition to the indirect link that organizational commitment and job satisfaction could have with a company's performance, there have also been studies that have built direct positive associations between these attitudinal variables and a firm's performance (Meyer and Smith, 2000; Meyer et al., 2002; Ostroff, 1992).

As the literature highlights the importance of examining the HR-attitudes connection, researchers' interest in this link has increased, resulting in a growing number of studies that have demonstrated a relation between 'high commitment' HRM practices and employees' organizational commitment and job satisfaction (Chang, 2005; Gould-Williams, 2004; Kinnie et al., 2005; Meyer and Smith, 2000; Paul and Anantharaman, 2003; Purcell et al., 2003, 2009; Whitener, 2001; Wright et al., 2003). In these studies, the most common 'high commitment' HR practices that were associated with employee attitudes are: competitive pay, performance-based compensation and profit sharing (as opposed to fixed pay that is job based, for control practices), internal promotion based on performance (as opposed to promotion that is solely based on years of residency in the firm, for control practices), training (that aims at developing employees' current and future developmental needs), high selectivity in hiring (as opposed to limited sophistication in selection, for control practices), information sharing (as opposed to task-specific information that is limited to need to know, for control practices), developmental appraisal, job security, work-life balance and job autonomy. Nonetheless, despite the growing attention towards the HR-attitudes connection, substantially more evidence into these linkages is still needed (Macky and Boxall, 2007; Purcell et al., 2009). Particularly, a key area that has not been well studied and that HRM scholars are attempting to understand, is 'why' and 'how' human resource management can be connected to employee attitudes (Chang, 2005).

The emerging literature into 'why' and 'how' HRM can be linked to attitudes currently emphasizes that human resource management's impact on organizational commitment and job satisfaction, depends on the implementation of HR policies in practice and employees' perception of HR practices; see figure 2.1 (Chang, 1999, 2005; Gartner and Nollen, 1989; Gould-Williams, 2004; Guest et al., 2004; Kinnie et al., 2005; Macky and Boxall, 2007; Meyer and Smith, 2000; Purcell et al., 2003,

2009; Wright and Nishii, 2004). Some studies have also highlighted the importance of worker groupings' characteristics in shaping the perception of HR practices-attitudes link (Kinnie et al., 2005; Purcell et al., 2009). The next sections elaborate on these areas and the model presented hereunder.

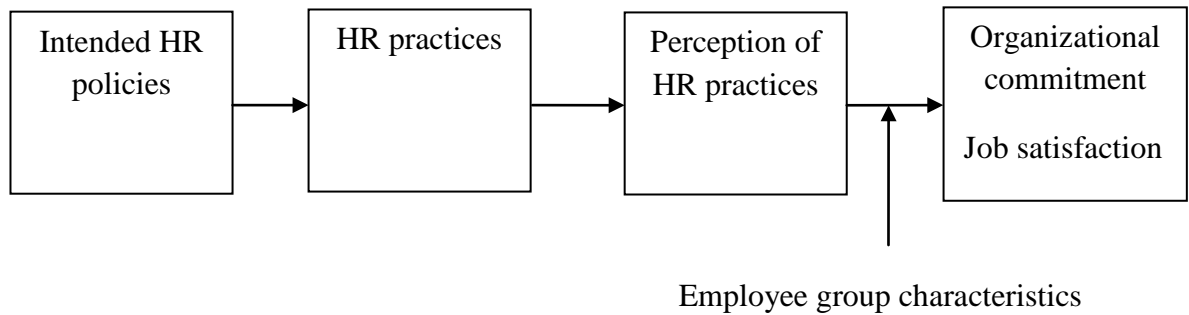


Figure 2.1: Understanding the HR-attitudes connection.

2.3. Perception of HR practices and employee attitudes

In relation to the first two boxes in figure 2.1, scholars have claimed that, in thorough investigations of the HR-attitudes link, perhaps the first issue to account for is the very distinction between an intended HR policy and the actual HR practice (Guest et al., 2004; Kinnie et al., 2005; Wright and Nishii, 2004). In effect, relating formal HR policies with attitudes can ignore the significance of the actual enactment of these human resource policies in practice (Kinnie et al., 2005; Purcell et al., 2003). In other words, by examining the sole presence of a formal HR policy, scholars can overlook the fact that the influence of that policy on attitudes can be partly reliant on how it is being implemented by the studied company (Kinnie et al., 2005; Wright and Nishii, 2004). Consequently, this indicates that HR-attitudes researchers need to pay attention to the execution of HR policies in practice, as this could generally offer a more accurate assessment of the role and impact of human resource management on the workforce and accordingly, might provide key insights

onto HR-attitudes linkages (Kinnie et al., 2005; Purcell et al., 2003, 2009; Wright and Boswell, 2002).

Subsequent to emphasizing the importance of examining actual HR practices when studying the HR-attitudes connection, and in connection with the third box in figure 2.1, it is critical to highlight that workers' reactions to HR practices are not necessarily influenced by the very existence of these practices. Instead, individuals' responses to HR practices might be more related to the means through which employees perceive the human resource practices directed towards them (Chang, 1999, 2005; Gartner and Nollen, 1989; Gould-Williams, 2004; Kinnie et al., 2005; Macky and Boxall, 2007; Meyer and Smith, 2000; Purcell et al., 2003, 2009; Wright and Nishii, 2004). This is because HR practices can often send messages portraying the extent to which an organization is dedicated to the wellbeing and interests of its workforce and, employees' attitudes seem to be derived from how they view, experience and/or interpret these messages (Chang, 2005). More particularly, research into social exchange theory illustrates that employees' work attitudes are generally developed from their perception of their firm's support, fair treatment and commitment towards them (Chang, 2005; Eisenberger et al., 1990; Hutchison and Garstka, 1996; Shore and Wayne, 1993; Wayne et al., 1997). In addition, authors have indicated that HR practices (such as pay, career opportunities and performance appraisal) can portray and strengthen a firm's organizational climate (Bowen and Ostroff, 2004). Therefore, perception of human resource practices can create collective views amongst employees about the type of relationship they need to develop with their organization (Bowen and Ostroff, 2004), which in turn, could help shaping work attitudes (Purcell et al., 2009).

The above paragraph has highlighted the key function that perceptions of HR practices can have in explaining the HR-attitudes connection (Chang, 2005). Accordingly, as employees' perceptions have been emphasized in previous research, the impact of human resource management on employees' attitudes is perhaps better investigated by asking the very workers who are directly affected by these practices (Kinnie et al., 2004, 2005; Paul and Anantharaman, 2003). Therefore, researchers into the HR-attitudes connection should be cautious not to solely collect their information on HR practices from a single respondent (such as the HR manager or

personnel executive) – who can generally be asked to list the available practices within the organization. This approach can ignore workers' perceptions and therefore, might not offer a true assessment of the role of HRM in shaping employees' attitudes (Kinnie et al., 2005). Hence, to achieve a more in-depth view of the HR-attitudes link and in order to decrease research bias, researchers might benefit more by collecting data from multiple informants or respondents (who can be the employees that are subject to HR practices) as opposed to just a single informer (who generally lists the existence or non-existence of a practice).

In their attempts to advance knowledge into the HR-attitudes link, researchers have provided some evidence of connections between perceived human resource practices and, employees' organizational commitment and job satisfaction. For instance, scholars have found links between workers' perception of 'high commitment' compensation practices and, organizational commitment and job satisfaction – such perception seems to project fair treatment and, a firm's dedication towards achieving its workforce's wellbeing and job aspirations (Chang, 2005; Gould-Williams, 2004; Macky and Boxall, 2007; Purcell et al., 2003, 2009). In another example, Purcell et al., (2003) have found an association between perception of job autonomy and, workers' organizational commitment and job satisfaction; such perception appears to project that the firm values its employees' input and is keen on providing them influence in their jobs. Moreover, Gould-Williams (2004) has found connections between perceptions of training opportunities and, employee commitment and job satisfaction; such perceptions seem to portray the extent to which management supports its workforce. As well, authors have shown associations between perception of communication practices and, workers' organizational commitment and job satisfaction; these perceptions appear to portray support and fairness from the company towards its employees (Gould-Williams, 2004; Macky and Boxall, 2007; Purcell et al., 2003). In other examples, scholars have found that employees' perceptions of career opportunities and, a fair and constructive appraisal system can influence their job satisfaction and organizational commitment; such perceptions could project fairness and signs of support for employees' knowledge and skills development (Chang, 2005; Gartner and Nollen, 1989; Macky and Boxall, 2007; Purcell et al., 2003). Researchers have also demonstrated connections between

perception of job security and, workers' commitment and job satisfaction; such a perception appears to portray support and commitment from the firm towards its workforce (Chang, 2005; Gartner and Nollen, 1989; Purcell et al., 2003, 2009). Last but not least, scholars have found links between employees' perception of work-life balance and, organizational commitment and job satisfaction; such a practice could reflect that the company cares about its workers' wellbeing (Kinnie et al., 2005; Purcell et al., 2003).

While a number of academic papers have demonstrated relationships between perception of HR practices and workers' attitudes, the majority of researchers in the field seem to assume that human resource practices can be similarly applied to all types of employees within an organization. Nonetheless, scholars have questioned these assumptions and have argued that a firm cannot always adopt the same HRM approach towards its entire workforce (Lepak and Snell, 1999, 2002, 2007). Interestingly as well, some studies have examined the function that worker groups' characteristics could play in between perception of HR practices and attitudes, and they found that different employee clusters might react in various ways to human resource practices (Kinnie et al., 2005; Purcell et al., 2009). Accordingly, it seems that having a more in-depth perspective of 'why' and 'how' perception of HR practices can impact attitudes, requires a consideration of the features of diverse worker groups.

2.4. Employee grouping

Before elaborating on the role of employee grouping characteristics within the HR-attitudes connection, it is perhaps helpful to firstly, shed some light onto how previous research has categorized different worker clusters.

2.4.1. Employment groups and subsystems

One of the most recognized attempts that distinguish between employee groupings in the academic literature is the development of the core-periphery framework by Atkinson (1984). The latter model differentiates between core employees and two separate groups of peripheral workers. The initial basis for distinction is between the

peripheral groups, where the first cluster represents workers who work onsite but are not employed by the organization (for example: information technology, clerical and catering workers), and the second peripheral group encompasses workers that are employed on temporary or fixed-term basis. Eventually, within the latter group, there exists a cluster of core workers who normally play a key role in assisting the organization on various work aspects.

Following Atkinson's (1984) logic towards worker groupings, some researchers have further developed the classification of different employee or occupational clusters. In particular, Lepak and Snell (2002) have differentiated amid four employment modes: knowledge based, job based, contract work and alliance. Furthermore, in an attempt to discern amongst more coherent job clusters, Wright and Boswell (2002) have recommended scholars to distinguish among the nine employee groups that the United States Equal Employment Opportunity Commission has categorized. This can offer a clear and more systematic way to differentiate between different employee groups, as well as the impact of HRM on each of these groupings (Purcell et al., 2009; Wright and Boswell, 2002). Along similar lines, in their study on firms within the United Kingdom, Purcell et al. (2009) have classified workers depending on the Standard Occupational Classification system (SOC 2000). The latter research attempted to investigate the influence of perception of HR practices on workers' attitudes, based on various SOC employee categories (managerial occupations, professional occupations, associate professional and technical occupations, administrative and secretarial occupations, skilled trades, personal service occupations, sales and customer service occupations, process/plant and machine operatives and, elementary occupations) (Purcell et al., 2009). The next paragraphs elaborate on some of the findings of Purcell et al.'s (2009) work, which contributes towards the perception of HR practices and attitudes relationship by demonstrating the importance of accounting for the main features of different employee or occupational groupings.

2.4.2. Perception of HR practices and attitudes of various occupational groups

In their development of the 'HR architecture' model, Lepak and Snell (1999, 2002, 2007) have argued that it is wrong to simplify the character of human capital and presume that one HR architecture can be used in managing all sorts of employees within a business entity (Lepak and Snell, 1999). In particular, these authors have claimed that one form of HRM cannot be implemented across workers because the value and uniqueness of a firm's human capital could necessitate different human resource configurations. In other words, Lepak and Snell have posited that it is difficult for one company to adopt a single human resource management approach for the majority of its workforce (Lepak and Snell, 1999, 2002, 2007). Following this argument, Kinnie et al. (2005) and Purcell et al. (2009) have attempted to examine whether different worker clusters could have diverging reactions to HR practices. Interestingly, these studies have found that the linkages between perception of HR practices and employee attitudes could differ depending on the worker group being investigated (Kinnie et al., 2005; Purcell et al., 2009). Particularly, Purcell et al. (2009) and Kinnie et al. (2005) have studied the influence of perception of HR practices on the organizational commitment of different occupational groups, such as: sales and customer service employees, skilled workers, professionals and lower skilled employees. Their main findings demonstrate that diverse occupational groups' levels of organizational commitment appear to be shaped differently by perception of various human resource practices. Mainly, the latter authors' findings demonstrate that since different employee clusters have various needs and characteristics, this could result in them responding in different ways to the HR practices directed towards them (Kinnie et al., 2005; Purcell et al., 2009).

For example, Purcell et al. (2009) found that the commitment of low-skill employees (including process plant and machine operatives as well as elementary workers) seems to be strongly associated with their perception of job security, while satisfaction with pay did not appear to significantly influence the attitudes of the latter employee group. These workers seem to have a great value for their job security (in many times even over higher pay), as they perceive that their skills and expertise often do not allow them to easily find other employments in the external market or within their own organization (ibid). As for the findings on sales and

customer service employees, these also reflected that such workers valued job security, but most interestingly, their organizational commitment was also not significantly associated with their perception of pay. The fact that such type of workers have high degrees of influence and control over their pay levels, meant that satisfaction with pay was more related to their personal efforts (Purcell et al., 2009). Moreover, the latter study found that teamwork was related to the organizational commitment of skilled workers, since it is the largest employee group that appears to work in teams. Purcell et al. (2009) also demonstrated that satisfaction with pay was important for both skilled workers as well as professionals. However, the organizational commitment of professional employees did not seem to be associated with career opportunities. The latter research indicates in that regard, that the characteristic of professionals (such as having very transferable skills) most probably meant that the latter group of workers aspires for career opportunities within the entire work sector rather than just inside its organizational boundaries.

In conclusion, the key findings from Kinnie et al. (2005) and Purcell et al.'s (2009) studies indicate that perception of HR practices can impact workers' attitudes in different ways, depending on the needs and characteristics of the examined employee cluster. Such an outcome can greatly contribute to the literature's knowledge on the perception of HR practices and attitudes link, since most of the previous research in this area has failed to account for the features of the studied employee groupings. Consequently, since little work has investigated workers' characteristics when examining the perception of HR and attitudes connection, there is a need for further developments along these lines in order to have a more thorough understanding of the relationship between HRM and employee attitudes. Particularly, further advancements in the literature could be achieved by examining the impact of perceptions of HR practices on the attitudes of specific occupational clusters (Kinnie et al., 2005). This could help identifying various lists of HR practices, where each list could be related to a certain occupational grouping (ibid).

Subsequent to discussing the first three boxes in figure 2.1 and the role that employee groups' features could have in between perception of HR practices and attitudes, the next 2 sections discuss the constructs in the fourth and last box in this figure: organizational commitment and job satisfaction. As mentioned earlier, the

significance of studying the impact of HRM on the latter attitudinal variables has been emphasized by scholars examining the HR-attitudes connection (Chang, 2005; Gould-Williams, 2004; Macky and Boxall, 2007; Whitener, 2001).

2.5. Organizational commitment

Employee commitment has been subject to extensive studies in the area of organizational research (Buitendach and De Witte, 2005). Commonly, there are three distinct dimensions of organizational commitment: affective, continuance, and normative commitment (Allen and Meyer, 1990). According to Mowday et al. (1982), affective commitment is defined as an employee's identification with and involvement in a particular organization. Affectively committed employees possess strong psychological bonds with their firms, work in line with their company's values and exert additional effort to achieve organizational goals (Bagraim, 2003; Mowday et al., 1979; Porter et al., 1974). On the other hand, continuance commitment is defined as the commitment that is based on the costs that the individual relates with leaving his or her company, whereas normative commitment delineates the feeling of being obliged to stay in the organization (Allen and Meyer, 1990). The majority of scholars have claimed that affective commitment is the most important, reliable and recognized of the aforesaid commitment dimensions (Allen and Meyer, 1996; O'Reilly and Chatman, 1986; Price and Mueller, 1981; Steers 1977; Meyer and Allen, 1997). In fact, research demonstrates stronger associations between affective commitment and, discretionary behavior and some measures of performance, than relations between these variables and other types of commitment (Mayer and Schoorman, 1992). Accordingly, in this current thesis, the focus is on the affective nature of commitment and the term 'organizational commitment' refers to the affective type of this construct.

Various antecedents of organizational commitment were identified and these were mainly related to individual or personal factors, job characteristics and work experiences (Allen and Meyer, 1996; Cascio, 1998; Mathieu and Zajac, 1990; Mowday et al., 1982). Some scholars also posit that organizational factors that send signals of support, value and/or fairness from the employer towards the workforce could play an important role in developing organizational commitment (Bridges and

Harrison, 2003; Meyer and Allen, 1997). For example, selection practices could lead to the hiring of highly qualified employees and consequently, could have a central function in the development of employees' skills and knowledge (Huselid, 1995). This can send a message of support from the firm towards its employees and can lead to feelings of commitment (Meyer and Allen, 1997; Purcell et al., 2003). Training courses could also help increase organizational commitment, as employees would feel that the organization is eager to support their knowledge and develop their abilities, which could translate in positive perceptions and can promote commitment (Gartner and Nollen, 1989; McElroy, 2001). In addition, Chang (2005) mentions that job security can enhance organizational commitment since it could indicate to employees that their firm is committed to have a long-term relationship with them, which can be reciprocated by feelings of commitment from the workers. Similarly, strong and open communication channels can develop a positive feeling towards the organization since employees would feel that their 'voice is being heard' and that they can trust their corporation, which could also translate into organizational commitment (McElroy, 2001). Additionally, internal promotional prospects can make employees feel that their career aspirations are best served by their employing firm, which can make the individual more committed to achieving organizational success (Gartner and Nollen, 1989; Wallace, 1995). As well, criteria of rewards distribution could also help shaping employees' organizational commitment, and were particularly found to be a key driver for professional workers' commitment towards their firm (Wallace, 1995). In effect, rewards aspects (such as stock ownership and performance-related pay systems) can generally portray the value of an individual's credentials in the eyes of upper management, and could motivate employees to exert their skills and capabilities towards achieving organizational goals (Boselie et al., 2005; Boxall and Purcell, 2003).

With regard to organizational commitment's outcomes, research demonstrates that committed employees are less likely to quit their employing organization (Cascio, 1998; Mayer and Schoorman, 1992; Meyer and Allen, 1997; Mowday et al., 1982). Furthermore, committed incumbents tend to support their peers and subordinates and are more dedicated to organizational policies and practices (Randall and O'Driscoll, 1997). Moreover, high levels of organizational commitment were described as being imperative for the effectiveness and

performance of today's organizations (Corsun and Enz, 1999). In effect, there is a growing body of research linking organizational commitment with higher levels of employee discretionary and extra role behaviors directed towards reaching a company's objectives (Appelbaum et al., 2000; Purcell et al., 2003; Wright et al. 2003). Such types of behaviors, as exhibited earlier, are described by scholars as key elements in enhancing performance within business entities (Coyle-Shapiro et al., 2004; Purcell et al., 2003).

However, even though researchers have demonstrated a positive link between organizational commitment and performance, this connection is still subject to criticism by attitudes scholars (Cohen 1991; DeCotiis and Summers 1987; Mathieu and Zajac 1990; Mowday et al. 1982; Steers 1977; Swailes 2002). Mainly, while there are several empirical studies offering evidence of a significant connection between commitment and performance, some authors claim that these associations are sometimes weak and difficult to moderate (Baugh and Roberts 1994; Leong et al. 1994; Mathieu and Zajac 1990). Nonetheless, Swailes (2002) clarifies that the majority of the weak relationships that are found between commitment and performance could be explained by the means through which performance is assessed and measured. For instance, 'in the direct or surrogate measures of performance used by researchers, colleagues may be able to 'cover-up' the poor performance of employees' (Swailes, 2002, p. 165). Moreover, performance is a general and broad term, but still scholars might need to depend on narrow data figures that embody a small segment of the overall performance within a certain company (ibid). Such claims by Swailes exhibit one of the many debates over the organizational commitment-performance relation and open the door for a discussion that could stretch beyond the objective of this thesis. Briefly however, it is worth mentioning that this thesis considers that organizational commitment can be linked to performance, by relying on evidence from previous research. In particular, scholars have argued that the means through which employees could help improve organizational performance are generally achieved when workers apply their skills and capabilities into tasks that are beneficial for the good of the firm and that can exceed the requirements of their formal job descriptions (Boxall and Purcell, 2003). Such behaviour is often associated with organizational citizenship behaviour, which is a construct that is directly controlled by the worker, and that has been

demonstrated to have a strong association with organizational commitment (Coyle-Shapiro et al., 2004; Van Dyne et al., 1994). Accordingly, this highlights the key function that commitment could have in impacting a firm's performance (Purcell et al. 2003; Swailes, 2002). Predominantly, increased levels of organizational commitment appear to play an essential role in organizational performance inside settings where the discretionary behaviour of employees is highly connected with the delivery of services; such as professional services organizations where the intellectual input of workers is often critical to a firm's effectiveness (Swailes, 2002).

2.6. Job satisfaction

For many years, scholars have attempted to empirically study satisfaction (Brooke and Price, 1989; Coster, 1992; Li-Ping Tang and Talpade, 1999). Hirschfeld (2000) defines job satisfaction as the degree to which employees like their jobs. Job satisfaction is portrayed as the individual's affective and emotional reaction to the job (Cranny et al., 1992). Incumbents have a relatively high job satisfaction level if they believe that their knowledge, skills and abilities (KSAs) are being used in the work environment and, that the organization is offering them opportunities for development and prospects that satisfy their key job aspirations (Clark, 1996; Locke, 1976; Roberts and Roseanne, 1998). Hence, job satisfaction is related to employees' perceptions of their jobs and their expectations out of it (Sempene et al., 2002). Human resource management practices such as job security, career opportunities, training and rewards can affect the job satisfaction level of workers (Brooke et al., 1988; Tetrick and LaRocco, 1987).

Locke (1976) advocates that job satisfaction can influence employees' mental conditions (stress), longevity, physical health, social behaviours, and their interaction at work. In fact, Buitendach and De Witte (2005) state that as job satisfaction entails incumbents' emotional feelings, it could have an important impact on their social behaviours. For management scholars the significance of empirically assessing the job satisfaction of workers in organizations is related to the effect of this variable on their discretionary behaviour, commitment, stress, absenteeism, turnover, pace, complaints and grievances (Brooke and Price, 1989; Buitendach and De Witte, 2005; Coster, 1992; Fletcher and Williams, 1996; Mueller and Price 1990; Purcell et al.,

2003). Furthermore, job satisfaction was described by authors as a likely contributor to a firm's performance (Purcell et al., 2003). For instance, there is research data associating employees' job satisfaction with customer satisfaction (Rogg et al., 2001) and in turn, to higher sales figures (Heskett et al., 1997). Moreover, whilst job satisfaction was linked to organizational performance indicators, Judge et al. (2001) have also found that job satisfaction is associated with individual employee performance.

Nonetheless, even though job satisfaction was associated with different levels of performance, such linkages have been criticised within the attitudes and performance literature. Perhaps one of the most acknowledged studies that have dismissed a notable connection between job satisfaction and performance is the research by Iaffaldano and Muchinsky (1985). In their study, the latter authors have demonstrated that the correlation between job satisfaction and performance is around 0.17 – which is a value based on which a number of scholars have harshly criticised the job satisfaction-performance connection (Brief, 1998; Cote, 1999; Spector, 1997). However, more recent studies within the job satisfaction and performance literature, have posed doubt towards Iaffaldano and Muchinsky's (1985) findings. For instance, Judge et al. (2001) have demonstrated that the actual correlation between job satisfaction and job performance lies around 0.3. While a 0.3 correlation could be considered as a moderate association between two variables (Cohen and Cohen, 1983), it could be noticed that such a correlation magnitude is very close to correlations (with job performance) found for the most reliable and widely accepted antecedents of job performance (Barrick and Mount, 1991; Gaugler et al., 1987; Judge et al., 2001). This indicates that the relationship between job satisfaction and job performance should not be disregarded within the literature (Judge et al. 2001). Moreover, it seems rather odd to dismiss a connection between job satisfaction and organizational performance, when research findings indicate that job satisfaction could lead to higher levels of organizational citizenship behaviour; which as stated, is a variable that has been associated with enhanced organizational performance (Bateman and Organ, 1983; Purcell et al., 2003).

Following the definitions of the organizational commitment and job satisfaction constructs, these two concepts might appear to be similar. Nonetheless, research indicates that those two terms are actually conceptually different (Gould-

Williams, 2003; Mowday et al., 1982). 'Commitment is considered to be a global concept, reflecting an individual's affective attachment to the organization as a whole, whereas job satisfaction is more specific that it is a positive emotional state resulting from the appraisal of one's job or experiences' (Gould-Williams, 2003, p. 34). Moreover, scholars advocate that organizational commitment is a more stable variable, whereas job satisfaction could be more affected by momentary aspects of an employee's job (ibid). Therefore, when investigating employees' attitudes, it is essential to differentiate amongst job satisfaction and organizational commitment (Gould-Williams, 2003; Mowday et al., 1982). However, whilst there are research findings exhibiting a positive association between workers' commitment and job satisfaction (Mathieu and Zajac, 1990), there is still a debate as to the causal direction of the latter relationship (Lance, 1991; Macky and Boxall, 2007; Vandenberg and Lance, 1992).

2.7. Conclusion

Most studies in the human resource management field seem to assume that HRM can impact organizational outcomes and company performance through its effect on workers' organizational commitment and job satisfaction (Appelbaum et al., 2000; Boselie et al., 2005; Macky and Boxall, 2007; Purcell et al. 2003; Whittener, 2001). Nonetheless, despite this presumption, the linkages between HRM and workers' attitudes were not thoroughly addressed in previous research (Appelbaum et al., 2000; Boselie et al., 2005; Gould-Williams, 2004; Macky and Boxall, 2007; Purcell et al., 2003; Whitener, 2001). While a number of studies have demonstrated a relationship between HRM and workers' commitment and job satisfaction (Chang, 2005; Gould-Williams, 2004; Meyer and Smith, 2000; Paul and Anantharaman, 2003; Purcell et al., 2003; Whitener, 2001; Wright et al., 2003), 'why' and 'how' this connection exists remains an intricate issue that requires substantially more empirical investigation (Chang, 2005; Purcell et al., 2003). The examination of previous research into the HR-attitudes connection points towards three main areas, based on which academic studies could help explaining 'how' and 'why' HRM can affect workers' organizational commitment and job satisfaction (Chang, 2005; Gould-Williams, 2004; Kinnie et al., 2005; Macky and Boxall, 2007; Purcell et al., 2003, 2009; Wright and Nishii, 2004). Firstly, in understanding the HR-attitudes link,

scholars argue that researchers need to clearly distinguish between a formal HR policy and, the actual implementation of that policy in practice, which would then form an HR practice (Kinnie et al., 2005; Wright and Boswell, 2002; Wright and Nishii, 2004). This is particularly important, as studies that solely account for intended HR policies, could overlook the fact that the impact of these policies on attitudes can be fairly dependent on the extent to which these policies are being implemented by the studied organization (Kinnie et al., 2005; Wright and Nishii, 2004). Secondly, research posits that employees' responses to human resource practices might not be necessarily influenced by the presence of HR practices inside organizations, but rather can be more affected by the means through which workers' view these practices (Chang, 1999, 2005; Gartner and Nollen, 1989; Gould-Williams, 2004; Kinnie et al., 2005; Macky and Boxall, 2007; Meyer and Smith, 2000; Purcell et al., 2003, 2009; Wright and Nishii, 2004). Employee attitudes are said to be shaped by workers' perception of their organization's support, fair treatment and their employer's commitment towards them (Chang, 2005; Eisenberger et al., 1990; Hutchison and Garstka, 1996; Shore and Wayne, 1993; Wayne et al., 1997). Scholars argue that such perceptions are not mainly derived by the existence of HR practices inside organizations, but rather more specifically, by how employees experience and view these practices (Chang, 2005; Meyer and Smith, 2000; Purcell et al., 2009; Whitener, 2001). Thirdly, while rather ignored by most scholars, the characteristics of different employee groups appear to affect the HR practices-attitudes connection (Kinnie, 2005 et al., 2005; Purcell et al., 2009). This implies that more thorough insights onto the linkages between perception of HR practices and, workers' commitment and job satisfaction could be gathered if scholars account for the needs and characteristics of different employee groupings (Purcell et al., 2009).

Interestingly, employee groups' characteristics could represent examples of contextual influences; since context could refer to aspects related to employees and, the organizational setting and environment in which workers are operating (Clinebell and Shadwick, 2005; Rousseau, 1978). Hence, if the features of worker clusters could influence the HR-attitudes link, then it might be that the attributes of contextual factors might have an effect on this connection. Support for such a claim is present in research on the HR-performance connection. Researchers in this field of

study are now positing that the characteristics of contextual factors can impact the HR-performance link (Becker and Huselid, 2006; Conway and Monks, 2008; Michie and West, 2004). Therefore, since the influence of HR practices on organizational performance outcomes can occur through workers' attitudes (Arthur, 1994; Boxall and Purcell, 2003; Gerhart, 2004; Wood and de Menezes, 1998; Wright and Nishii, 2004), it might be that context could also affect the connections between HR practices and employee attitudes. Nonetheless, while researchers have provided some important knowledge into 'why' and 'how' HR practices can be linked to attitudes, there are few studies that have considered the function that contextual elements could have in the HR-attitudes link. Whereas there are some insights in the literature on the role of worker groups' features (Kinnie et al., 2005; Purcell et al., 2009), the characteristics of factors from the context of organizations within which employees operate were rather neglected in previous studies on the HR-attitudes link. However, if contextual elements could have a function in the HR-attitudes connection then accounting for factors from the context of the companies where employees are working seems necessary for a more thorough understanding of the influence of HR practices on attitudes. For example, if the characteristics of contextual factors in a worker cluster's employing firm can influence the impact of HR practices on its attitudes, then the HR-attitudes connection for this grouping might be shaped by both, the features of this group and the attributes of contextual factors in the firm where this cluster is operating.

Therefore, in an attempt to provide more insights into 'why' and 'how' HRM could be connected to workers' attitudes, the next chapter will shed some light on the possible role that some factors from the context within which employees operate (human, social and organizational capital) could have in the influences of HR practices on attitudes.

CHAPTER 3

The role of context (human, social and organizational capital) in the connection between perception of HR practices and employee attitudes

3.1. Introduction

This chapter attempts to understand how factors from the context within which employees operate could influence the linkages between HR practices and employee attitudes. ‘Context can be defined as the set of circumstances or facts surrounding an event’ (Rousseau, 1978, p. 522). It could represent features pertinent to employees and, the organizational setting and environment within which employees are working (Clinebell and Shadwick, 2005; Rousseau, 1978). As indicated in the previous chapter, the characteristics of worker groups could affect the influence of HR practices on attitudes (Kinnie et al., 2005; Purcell et al., 2009). Therefore, as the features of employees could represent examples of contextual influences it might be that contextual elements could have an impact on the HR-attitudes connection. Support for this argument can be found in the literature on the linkages between HR practices and organizational performance. Scholars researching the HR-performance connection are now positing that this link can be influenced by elements from the organizational context (Becker and Huselid, 2006; Conway and Monks, 2008; Michie and West, 2004). Hence, as the impact of HR practices on performance can occur through employees’ attitudes (Arthur, 1994; Boxall and Purcell, 2003; Gerhart, 2004; Wood and de Menezes, 1998; Wright and Nishii, 2004), it might also be that context could influence the linkages between HR practices and attitudes. However, while scholars have provided some important insights into ‘why’ and ‘how’ HR practices can be connected to attitudes, there are few researchers who have accounted for the role that contextual elements could have in the HR-attitudes connection. While there is some knowledge on the function of employee groups’ characteristics, the attributes of elements from the context of firms within which workers operate were somewhat ignored in earlier studies on the HR-attitudes link. Yet, if the features of contextual factors could have a role in the HR-attitudes

connection then considering factors from the context of organizations where employees are working seems important for a more thorough understanding of the impact of HR practices on attitudes. For example, if the features of such contextual elements can affect the impact of HR practices on attitudes, then the HR-attitudes link for a certain employee group might be shaped by both, the characteristics of this grouping and the attributes of contextual elements in the organization where this cluster is operating. This implies that the HR-attitudes connection for the same employee group might vary, depending on the characteristics of the context within which this group is operating. Moreover, the influence of HR practices on the attitudes of different worker groups (who have some diverging features) might not just differ due to their dissimilar features, but this connection could also vary because the attributes of elements from the contexts in which each of these groupings are operating might affect their HR-attitude link in different ways. Accordingly, an examination of contextual factors from a firm's setting and environment seems necessary for a more thorough understanding of 'how' and 'why' HR practices could be connected with employee attitudes.

While there could be numerous factors in the context within which workers operate, this chapter focuses on the following contextual elements: human, social and organizational capital. Earlier research indicates that these contextual factors can be influenced by HR practices (Kang et al., 2007; Leana and Van Buren, 1999; Youndt and Snell, 2004; Youndt et al., 2004). In turn, the examination of previous studies appears to give some indications that lead to argue that these forms of capital might perhaps have an impact on workers' attitudes (Leana and Van Buren, 1999; Nahapiet and Ghoshal, 1998; Purcell et al., 2009). Therefore, these contextual elements might have a role in between HR practices and attitudes. However, very few studies have accounted for human, social and organizational capital when examining the effect of HR practices on the attitudes of employees.

This chapter reviews previous literature related to these three forms of capital (Adler and Kwon, 2002; Hansen et al., 1999; Kang et al., 2007; Leana and Van Buren, 1999; Nahapiet and Ghoshal, 1998; Subramaniam and Youndt, 2005; Swart, 2006; Swart and Kinnie, 2007; Youndt and Snell, 2004; Youndt et al., 2004). It starts by defining human, social and organizational capital. Subsequently this chapter

discusses the influence that perception of HR practices could have on human, social and organizational capital. It then examines the possible linkages that could exist between these forms of capital and, workers' organizational commitment and job satisfaction. Following this discussion, the chapter highlights the possible role that these contextual factors could have in the influence of perception of HR practices on employees' organizational commitment and job satisfaction.

3.2. Human, social and organizational capital

A firm's capacity to develop and apply its expertise and knowledge is highly related to its intellectual capital (Subramaniam and Youndt, 2005). The most commonly given definition for intellectual capital delineates this concept as the overall knowledge and capabilities that an organization can use in order to achieve a competitive advantage (Nahapiet and Ghoshal, 1998; Stewart, 1997; Youndt et al., 2004). Intellectual capital encompasses three main aspects which are: human, social and organizational (Davenport and Prusak, 1998; Nahapiet and Ghoshal, 1998; Subramaniam and Youndt, 2005; Youndt and Snell, 2004; Youndt et al., 2004).

3.2.1. Human capital

The term human capital is delineated as individuals' knowledge, skills, abilities and intellect (Becker, 1964; Schultz, 1961; Subramaniam and Youndt, 2005; Swart, 2006; Youndt et al., 2004). This construct is defined by the majority of scholars as one that is possessed by the employee at the individual rather than the organizational level (Bontis, 1998; Davenport, 1999; Lepak and Snell, 1999; Swart, 2006). While being an employee-focused construct, scholars argue that the concept of human capital stresses on the positive outcomes that a firm could obtain in return for its economic investment in employee learning and knowledge development (Lepak and Snell, 1999). Such an approach by Lepak and Snell (1999) differs from earlier work on human capital, which used to focus more on the economic returns that workers obtain from investing in their own education, skills and expertise (Becker, 1964). Lepak and Snell (1999) discern amongst different types of human capital based on their value and uniqueness to the organization. In the case where human capital was acquired from outside the organization, this could be described as a more common form of capital, and is generally said to be more easily transmitted between

companies – this is sometimes coined in the literature as ‘generic’ human capital (Swart, 2006, p. 141). Consequently, this form of human capital is more easily specified and is often considered by individuals as a noteworthy economic investment, since it could be widely recognized by employers on the job market. Swart (2006) gives some examples of measures of generic human capital, such as: education level (including formal degrees and certifications) and number of years of work experience. On the other hand, human capital that is less transferable and more unique is often based on company-specific knowledge and is generally considered to be of high value for the firm. Company-specific knowledge can generate innovations and can provide high competitiveness on the market. Organizations are generally responsible for the investments they make in company-specific knowledge and, workers who seek to advance their firm-specific learning commonly tend to maintain their employment within their organization (Swart et al., 2003; Valcour and Snell, 2002). Company-specific learning is said by scholars to be largely acquired through unique and complex learning processes that are often embedded within the employing organization (Swart, 2006; Tsoukas, 1996). Examples of indicators of firm-specific human capital are years working with the employing firm and knowledge of the company’s unique working techniques. In addition to firm-specific knowledge, the literature also describes a human capital that is industry-specific (in the form of a strong and in-depth knowledge in a particular industrial sector) or occupation-specific (such as the knowledge that an individual possesses from being a physician or a lawyer) (Gimeno et al., 1997; Swart, 2006; Tallman et al., 2004). Investments in this type of human capital are generally undertaken by the individual and by the industry (for example, when the person was trained as an intern in the sector) (Swart, 2006). This form of human capital is hence, both theoretical and tacit, and is generally gathered through years of experience and practice. Indicators of industry-specific and occupation-specific human capital can be the type of education and years of experience in a specific sector.

3.2.2. Social Capital

Leana and Rousseau (2000) posit that one of the key factors behind an organization’s competitive advantage is the nature of its internal employee relationships as well as the quality of the firm’s connections with its clients and suppliers. Accordingly, there

is an increasing interest amongst management scholars in studying social relationships at work, which are often coined under the term social capital. 'Social capital is the goodwill available to individuals or groups. Its source lies in the structure and content of the actor's social relations. Its effects flow from the information, influence, and solidarity it makes available to the actor' (Adler and Kwon, 2002, p. 23). Social capital is commonly portrayed in the literature as an asset entrenched in the relationships between systems, communities and individuals (Burt, 1997; Coleman, 1990; Nahapiet and Ghoshal, 1998; Youndt et al., 2004). However, while the majority of previous definitions for social capital view social relations between individuals as the main basis for this construct (Adler and Kwon, 2002), it is the unit of analysis within which these relationships exist that commonly vary amongst studies – such as the organization, the individual or the society (Burt, 1992; Coleman, 1990; Leana and Van Buren, 1999; Nahapiet and Ghoshal, 1998; Putnam, 1993; Swart, 2006).

One of the most important studies that have examined social capital in organizations is that of Leana and Van Buren (1999). Their research defines social capital in organizations, 'as a resource reflecting the character of social relations within the firm' (Leana and Van Buren, 1999, p. 540). According to Leana and Van Buren (1999) the main components of social capital inside companies are: associability and trust. They delineate associability as 'the willingness and ability of participants in an organization to subordinate individual goals and associated actions to collective goals and actions (Leana and Van Buren, 1999, p. 541). Associability can be closely compared with the notion of collectivism (Leana and Van Buren, 1999; Ouchi, 1980; Wagner, 1995). A collectivistic culture is predominantly described by the cooperation that exists between actors and by the importance given to the interests and wellbeing of the collective (Early, 1989; Leana and Van Buren, 1999). For Leana and Van Buren (1999), groups that are characterized by a strong associability should have the willingness and a general ability to reach an agreement on collective objectives. Nonetheless, Leana and Van Buren (1999) indicate that associability is not just characterized by the readiness and ability to agree on collective goals but also by the will and, capacity and/or skills to achieve these common objectives, through collective action.

The second main element of social capital in organizations is trust (Leana and Van Buren, 1999), which is a construct that is increasingly being researched by management and behavioural scholars (Rousseau, 1995; Rousseau et al., 1998; Whitener, 2001). Trust is defined as ‘a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviour of another’ (Rousseau et al., 1998, p. 395). This construct seems to represent both an antecedent and a result of high levels of collective work and action amongst organizational members (Nahapiet and Ghoshal, 1998). Leana and Van Buren (1999) differentiate between fragile and resilient trust (Ring and Van de Ven, 1992). Fragile trust is developed through individuals’ expectations of close or instant benefits (Ring, 1996). Therefore, such type of trust does not appear to last beyond the immediate transaction, which could undermine its role in developing long lasting relationships (Leana and Van Buren, 1999; Rousseau, 1995). Conversely, resilient trust was described by scholars as playing a more significant role than fragile trust in building connections amongst organizational members (Leana and Van Buren, 1999; Ring and Van de Ven, 1992). Scholars posit that such type of trust is often built through a person’s knowledge of other members and, her or his perception of their ethics and integrity (Ring and Van de Ven, 1992). It is important to note however, that social relations inside organizations do not seem to only develop through trust resulting from members who have a direct connection or knowledge of one another (Leana and Van Buren, 1999). Trust developing from norms that are widely spread across an entity and, amongst actors who do not necessarily have a direct relation or knowledge of each others, has been argued to encourage actors to engage in collective work and actions (Putnam, 1993).

3.2.3. Organizational capital

The third type of intellectual capital is denoted by organizational capital and is the sort of capital that does not reside in individuals or in networks of relations (Youndt et al., 2004). Organizational capital encompasses the knowledge that a firm stores in its procedures, structures, systems, routines, databases, patents and manuals (Hall, 1992; Keenan and Aggestam, 2001; Subramaniam and Youndt, 2005; Swart and Kinnie, 2007; Walsh and Ungson, 1991; Youndt et al., 2004). Accordingly, organizational capital is knowledge that is owned by the organization and, as Youndt

et al. (2004, p. 338) have indicated, 'is the knowledge, skills, and information that stays behind when an organization's people go home at night'.

3.3. The role of human, social and organizational capital in the connection between perception of HR practices and attitudes

The function played by human, social and organizational capital in today's businesses was described in earlier academic studies (such as: Adler and Kwon, 2002; Hansen et al., 1999; Kang et al., 2007; Leana and Van Buren, 1999; Nahapiet and Ghoshal, 1998; Subramaniam and Youndt, 2005; Swart, 2006; Swart and Kinnie, 2007; Youndt and Snell, 2004; Youndt et al., 2004). While previous research into these forms of capital did not thoroughly address the role that human, social and organizational capital could have in the HR practices and employee attitudes connection, earlier studies offer valuable insights indicating that these forms of capital might have a function in the influence of perception of HR practices on employee attitudes. Mainly, based on existing literature on human, social and organizational capital, it could be argued that perception of HR practices might perhaps impact human, social and organizational capital and in turn, these forms of capital might affect employee attitudes. The subsequent two sections will elaborate on the latter two areas.

3.3.1. The influence of perception of HR practices on human, social and organizational capital

Previous research argues that human resource management practices can affect a company's human, social and organizational capital (Adler and Kwon, 2002; Clark, 2003; Dyer and Nobeoka, 2000; Kang, et al., 2007; Kang and Snell, 2009; Leana and Van Buren, 1999; Nahapiet and Ghoshal, 1998; Youndt and Snell, 2004; Youndt et al., 2004).

In relation to social capital, scholars posit that HR practices could help promoting aspects of social capital in organizations (Adler and Kwon, 2002; Clark, 2003; Dyer and Nobeoka, 2000; Kang, et al., 2007; Leana and Van Buren, 1999; Nahapiet and Ghoshal, 1998; Snell, 1999; Youndt and Snell, 2004). Social capital can be developed by implementing HR practices that can enhance trust, increase

stability and promote flexibility in how workers are organized inside these steady relationships (Barrett et al., 2000; Leana and Van Buren, 1999). These practices should focus on creating long-term relationships and encouraging the attainment of collective goals (Leana and Van Buren, 1999). Moreover, scholars agree that building social capital necessitates human resource practices that could lead to high levels of collaborations and collective action amongst organizational actors (Leana and Van Buren, 1999; Youndt and Snell, 2004). Particularly, collaborative work often requires strong staff selection criteria for team memberships, where focus is given to interpersonal characteristics, in order to select teammates that possess close 'ways of thinking' and can cope well together (Youndt and Snell, 2004). This emphasis on interpersonal traits should however, also extend to the selection of newly hired employees in order to make sure that the firm is not only attracting people with the right skills for the job, but also individuals that have interpersonal characteristics and values similar to those of its workforce (Purcell et al., 2009). In effect, scholars posit that one of the likely means to develop social capital is for firms to select new employees that share its work values, and that have the ability to achieve common goals with existing organizational members (Bigley and Pearce, 1998; Leana and Van Buren, 1999; McKnight et al., 1998). In addition to selection, job security can create long-term relational contracts between various actors within the organization (Rousseau, 1995), which could assist in the formation of social capital (Dyer and Noboeka, 2000; Leana and Van Buren, 1999). Moreover, performance appraisal systems that are mostly owned by workers can help building social capital (Latham and Wexley, 1981; Leana and Van Buren, 1999; Purcell et al., 2009). Particularly, 360-degree performance evaluation systems can enable employees to constructively and readily share each others' perceptions of their job performance. This could encourage exchanges within or across working groups and can enhance trust levels amongst interacting organizational members (Conway, 1999; Kang et al., 2007), which might contribute to the development of social capital. Higher levels of trust across business entities could also be enhanced through financial rewards that encourage common goals and objectives – such as stock ownership and profit sharing (Huselid, 1995; Ichniowski et al., 1997; MacDuffie, 1995). As well, motivations for collective work could be developed through remunerations that tie employees' goals with organizational objectives (Leana and Van Buren, 1999); such as performance-related pay systems that reward individual

outcomes with a share from the company's overall revenues. Leana and Van Buren (1999) warn however, that firms should be careful not to develop compensation systems that promote collective work while ignoring to encourage the individual human contribution, as this could undermine the value of the human capital. In addition to compensation, communication practices that convey organizational values and goals, and that describe means of collective work, can help building social capital inside firms (Leana and Van Buren, 1999). Before concluding this paragraph, it is worth mentioning that earlier studies have posited that along with HR practices, the design of working teams could represent an important contributing factor towards building social relationships within companies (Kang et al., 2007; Leana and Van Buren, 1999; Reagans and Zuckerman, 2001). For instance, scholars have indicated that collaborative work across entities could be generated through the construction of teams with permeable work structures (Kang et al., 2007). As well, team memberships on temporary basis can offer employees with chances to mingle with different stakeholders and organizational members, and therefore, can also promote exchanges amongst various actors, which could help enhancing levels of trust across the workforce (Kang et al., 2007; Leana and Van Buren, 1999; Reagans and Zuckerman, 2001).

Human resource management might also impact a firm's organizational capital, mainly through HR practices that can encourage employees to create and/or develop knowledge storage containers – such as work processes, manuals and databases (Hansen et al., 1999; Youndt and Snell, 2004; Youndt et al., 2004). For example, performance appraisal and performance related pay might help building a firm's organizational capital. Particularly, if employees' contribution to organizational capital is positively noted in performance evaluation practices, and is then rewarded with monetary compensation, then performance appraisal and performance related pay might offer an incentive for employees to participate in the development of their firm's organizational capital.

In relation to human capital, the literature posits that firms can enhance this form of capital by either attracting knowledge from the external job market or by developing their employees' skills and knowledge (Youndt and Snell, 2004). Human resource practices can help organizations in enhancing their workers' knowledge and

can play a key function when companies seek to acquire knowledge from outside of their boundaries (Purcell, 2009). For instance, by attracting and hiring new employees (who often possess required expertise and knowledge), recruitment and selection practices are often seen as one of the most prominent strategies for acquiring human capital (Youndt et al., 2004). In addition, training practices can play an important role in enhancing employees' skills and knowledge and hence, could assist in the development of a firm's human capital (Snell and Dean, 1992). Moreover, career opportunities in terms of internal promotional prospects can encourage individuals to invest more effort in advancing their knowledge and capabilities (Horwitz, 2003; Koch and McGrath, 1996).

In sum, the literature on human, social and organizational capital argues that HR practices can help promoting these forms of capital through the influence of these practices on the workforce (Adler and Kwon, 2002; Clark, 2003; Dyer and Nobeoka, 2000; Kang, et al., 2007; Leana and Van Buren, 1999; Nahapiet and Ghoshal, 1998; Youndt and Snell, 2004; Youndt et al., 2004). However, as employees are the central actors to whom HR practices are being directed (Appelbaum et al., 2000; Macky and Boxall, 2007; Purcell et al., 2003), the effect of HR practices in an organization appears to be more likely shaped by how employees view human resource practices, rather than the very existence of these practices (Chang, 1999, 2005; Gartner and Nollen, 1989; Gould-Williams, 2004; Macky and Boxall, 2007; Meyer and Smith, 2000; Ostroff and Bowen, 2000; Wright and Boswell, 2002; Wright and Nishi, 2004). Therefore, it could be argued that the impact of HR practices on human, social and organizational capital is more likely to occur through employees' perception of these HR practices, rather than their mere presence.

3.3.2. The influence of human, social and organizational capital on organizational commitment and job satisfaction

When an organization provides its workers with enough opportunities for development and growth, employees could feel that their interests are well served inside their firm and, that their company is supporting them and is committed towards their wellbeing, which could translate in positive work attitudes (Arthur,

1994; Gartner and Nollen, 1989; Purcell et al., 2009). In particular, when employees perceive that their firm is offering them with possibilities for skills and knowledge growth, this could portray a company's commitment towards its workforce and can provide workers with a sense of achievement from their job, which could lead to employees reciprocating in organizational commitment and job satisfaction (Arthur, 1994; Chang 1999, 2005; Gould-Williams, 2004; Purcell et al., 2009). An organization's human, social and organizational capital could help in the exchange and development of employees' knowledge and skills (Adler and Kwon, 2002; Hansen et al., 1999; Kostova and Roth, 2003; Leana and Van Buren, 1999; Nahapiet and Ghoshal, 1998; Youndt and Snell, 2004; Youndt et al., 2004). Therefore, as a firm's human, social and organizational capital appear to assist in the enhancement of employees' skills and knowledge, and as such opportunities for development could influence employee attitudes, it could be argued that these variables from a firm's context might assist in shaping workers' organizational commitment and job satisfaction.

Particularly, social capital could play an essential role in an organization's competitiveness and survival (Bouty, 2000; March, 1991; Nahapiet and Ghoshal, 1998; Nonaka et al., 2000). Social capital can allow ideas to be connected between different organizational actors in a flexible manner that enables learning and the creation of innovations (Leana and Van Buren, 1999). This contextual factor was described as a mediating genre of intellectual capital that can create and store knowledge inside networks of relations (Adler and Kwon, 2002; Hansen et al., 1999; Kostova and Roth, 2003; Nahapiet and Ghoshal, 1998; Youndt and Snell, 2004). Previous research emphasizes that large portions of knowledge creation and exchange amongst workers can occur through social capital (Adler and Kwon, 2002; Dyer and Nobeoka, 2000; Nahapiet and Ghoshal, 1998). For instance, recurrent relations between organizational members that are enclosed in small circles can assist them in deepening their knowledge and skills (Kang, Morris and Snell, 2007; Leana and Van Buren, 1999). Scholars have also indicated that trust, between actors who did not necessarily have prior personal interactions amongst each other, could facilitate the exchange of in-depth knowledge (Dyer and Nobeoka, 2000; Kang et al., 2007; Leana and Van Buren, 1999). On the other hand however, frequent employee social relations inside closed networks could hinder their prospects to be exposed to

different novel knowledge areas (Gargiulo and Benassi, 2000). Conversely, the presence of irregular connections between employees that are spread across large working units inside an organization (or between employees across firms) could assist in exchanging novel ideas and new knowledge amongst these workers (Burt, 1992; Hargadon and Fanelli, 2002; Kang, et al., 2007). Because of the role of social capital in knowledge advancement, the literature indicates that this construct could have a key function in the management of an organization's workforce (Leana and Van Buren, 1999; Nahapiet and Ghoshal, 1998; Purcell et al., 2009). In fact, one of the significance of social capital is that this form of capital is generally maintained within the firm even in the case of alterations of particular organizational members (Subramaniam and Youndt, 2005; Youndt et al., 2004). Therefore, whilst the firm might depend on its workforce for the knowledge and capabilities it brings, employees could need to rely on their employing company for access to such networks of relations (Bowman and Swart, 2007; Purcell et al., 2009). This implies that the benefits that workers can gain from the existence of social capital inside their organization might have an influence on their work attitudes. When employees perceive that their company is offering them opportunities to work with bright and talented people, who share similar goals and who offer a strong platform for knowledge and skill advancement, these workers could feel that their interests are well served inside their firm and, this might shape attitudes towards the job and the organization. According to Leana and Van Buren (1999, p.547), 'organizational social capital can provide the individual with a rationale for deferring his or her immediate individual interests in favor of longer-term group and organizational goals'. Furthermore, Purcell et al. (2009) have argued that social capital could be a central reason behind employee retention, as this construct can help developing workers' skills and capabilities. Similarly, previous work also demonstrates that social capital can help reducing turnover rates in organizations (Krackhardt and Hanson, 1993).

In relation to organizational capital, a company's procedures, databases, patents and manuals can offer a valuable source of institutionalized experience and knowledge (Hansen et al., 1999; Youndt and Snell, 2004). Organizational capital could enable firms and their workers to preserve knowledge and to process it in a fast and structured way, and is often seen as a highly reliable foundation of

knowledge inside companies (Katila, 2002; Subramaniam and Youndt, 2005). Accordingly, organizational capital can enhance knowledge utilization and can provide a platform that helps workers in advancing their skills and knowledge – by providing access to knowledge from previous projects and experiences, scientific tests, mistakes, existing proofs etc. (Lyles and Mitroff, 1980; Martin and Mitchell, 1998; Youndt and Snell, 2004). In particular, by assisting workers to repeatedly use their firm's preserved knowledge, organizational capital can aid them in deepening their knowledge and skills (Katila and Ahuja, 2002; Subramaniam and Youndt, 2005). This is perhaps why scholars have argued that employees can rely on their firm's databases, manuals and processes in order to use and advance their knowledge into a particular area (Subramaniam and Youndt, 2005; Youndt et al., 2004). Accordingly, as organizational capital is an asset that is owned by the employing firm (Youndt and Snell, 2004), it could be argued that if employees perceive that their company's organizational capital can provide them with possibilities for knowledge development, this could project that their firm is offering them opportunities for growth and development, which could translate into positive attitudes towards the job and the employer.

While social and organizational capital might directly influence employee attitudes, a firm's human capital might have an indirect impact on workers' attitudes, as it could affect the development of social and organizational capital (Kang et al., 2007; Youndt et al., 2004). With regard to its effect on social capital, the literature seems to indicate that human capital can impact social capital, because individuals' skills and knowledge can help in the development of aspects of social capital. For example, Kang et al. (2007) posit that based on the human capital characteristics of an organization, common component knowledge might form between workers. Particularly, when employees have worked on similar technical tasks and hence, have developed common experiences this could help promoting common languages (Brown and Duguid, 2001, Cicourel, 1973; Kang et al., 2007), which could assist in the development of social capital (Nahapiet and Ghoshal, 1998). In addition, employees' interpersonal skills can play an important role in facilitating relationships and collective work inside organizations and hence, can help shaping a firm's social capital (Leana and Van Buren, 1999; Youndt and Snell, 2004). In addition to its impact on social capital, human capital seems to influence a firm's organizational

capital, as employees' knowledge and experiences are likely to contribute to the development of an organization's procedures, databases and manuals (Hansen et al., 1999; Youndt and Snell, 2004). For instance, employee experiences from previous projects most often help in the development and optimization of an organization's work procedures (Youndt and Snell, 2004). As well, individuals' knowledge and experiences are commonly used to update learning databases (Youndt et al., 2004).

3.3.3. The function of human, social and organizational capital in the perception of HR practices and attitudes connection

The arguments presented in subsections 3.3.1 and 3.3.2 seem to indicate that perception of HR practices might help building human, social and organizational capital, and that these forms of capital might affect employees' organizational commitment and job satisfaction. Therefore, perception of HR practices could perhaps influence workers' organizational commitment and job satisfaction, through human, social and organizational capital; as illustrated in the following diagram (figure 3.1). It is worth noting that, in figure 3.1, the connection between human capital on one side and, social and organizational capital on the other, could be pointing in both directions (as social and organizational capital can as well, impact workers' skills and knowledge). Furthermore, it could be argued that employee attitudes might also affect a firm's social and organizational capital; hence the direction of this relationship could also tip from commitment and job satisfaction towards these forms of capital. However, as the key objective of this thesis is to understand the impact of perception of HR on attitudes, its main focus is on the linkages directed from the forms of capital towards attitudes and not vice versa.

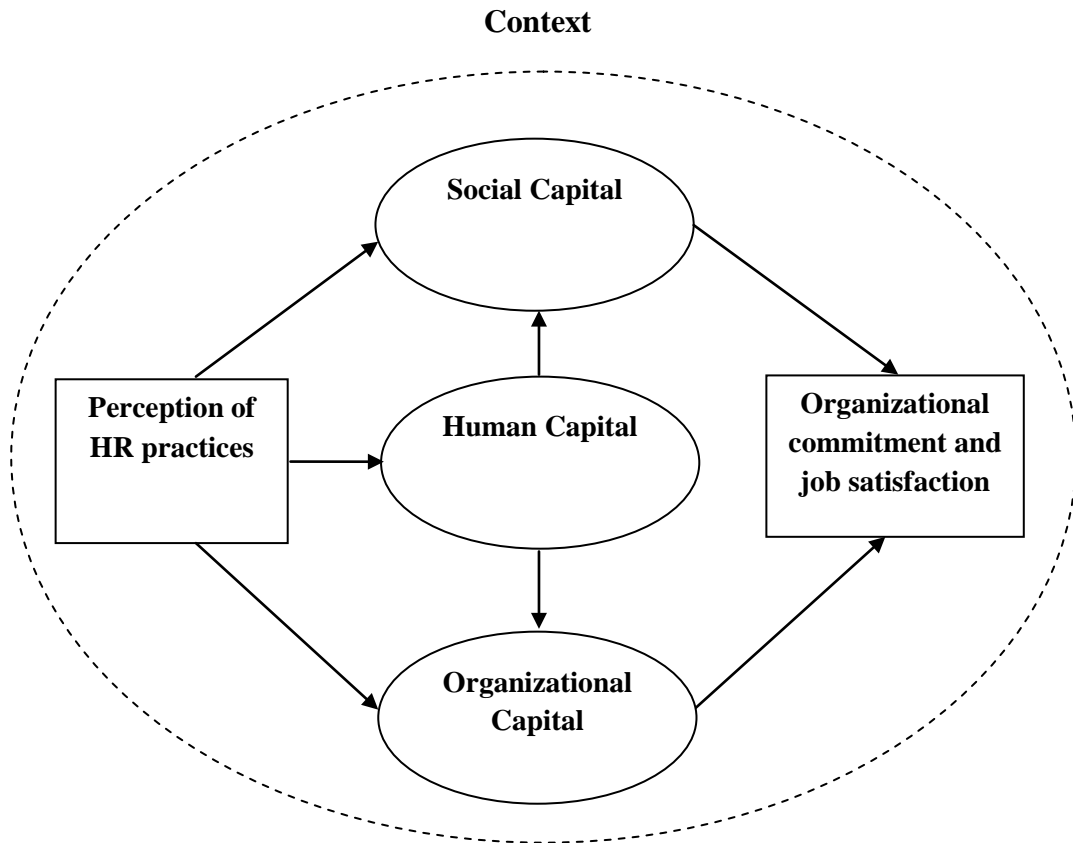


Figure 3.1: The role of human, social and organizational capital in the connection between perception of HR practices and, commitment and job satisfaction.

After arguing that perception of HR practices might impact employee attitudes through forms of capital, it is important to indicate that there is little scholarly research which has addressed such function for these contextual factors. Therefore, a consideration of human, social and organizational capital in empirical investigations might provide more in-depth explanations onto the linkages between perception of HR practices and attitudes. The examination of these forms of capital could help indentifying HR practices whose perception can indirectly impact attitudes, through different forms of capital. Hence, this could reveal additional mechanisms through which HR practices can be connected to attitudes. Moreover, these indirect linkages between perception of HR practices and attitudes (through forms of capital) might vary, if the characteristics of forms of capital vary. This is because scholars posit that the influence of contextual elements on employees' responses could differ depending on the features of these contextual factors

(Clinebell and Shadwick, 2005; Podsakoff et al., 1993; Rousseau, 1978). Therefore, as the attributes of human, social and organizational capital can vary between firms, accounting for these contextual elements might provide a more thorough understanding of the HR-attitudes connection for workers operating in companies that have different features of these forms of capital.

Accordingly, whereas a few recent studies posit that the perception of HR practices-attitudes link can be dependent on the attributes of the studied employee group (Kinnie et al., 2005; Purcell et al., 2009), it seems that accounting for the characteristics of worker groupings might not alone, be sufficient for the understanding of the perception of HR practices and attitudes connection. This is because employee groups can be operating in various firms that could be encompassing different features of forms of capital. As a result, these different characteristics might lead to perception of HR practices affecting attitudes in different ways. For instance, while perception of certain HR practices can influence the attitudes of a certain group of customer service employees, irrespective of the features of forms of capital in the setting where these workers are operating, there could be some HR practices whose perception can indirectly influence the attitudes of this cluster depending on the attributes of human, social and organizational capital inside its employing firm. This implies that, for this same group of customer service workers, the HR-attitudes connection could vary based on the features of forms of capital in the firm within which this group is employed. In other words, if two groups of customer service employees (who rather possess similar characteristics) are operating in organizations with different features of forms of capital, then perception of HR practices might influence the attitudes of these two clusters in different ways; due to the different characteristics of context amid their respective firms. Moreover, considering two groups of engineers (that have some rather different features), where each of these clusters is employed in a firm with particular attributes of forms of capital. In such a case, the HR-attitudes connection between these two groups might not just vary because of their dissimilar features, but also because the characteristics of forms of capital in their respective firms might be affecting their HR-attitudes link differently. Therefore, in understanding the HR-attitudes link between these two groups, it might be important to account for both the

attributes of these worker clusters and the characteristics of human, social and organizational capital inside each of their employing organizations.

3.4. Conclusion

Based on previous research, this chapter has argued that context (in terms of human, social and organizational capital) might have a role in the influence of perception of HR practices on, organizational commitment and job satisfaction. Interestingly however, in the academic literature, there is little empirical work that has attempted to thoroughly investigate such a function. Accordingly, accounting for human, social and organizational capital when studying the perception of HR practices and attitudes link, might contribute to the understanding of ‘why’ and ‘how’ perception of HR practices can be linked to workers’ organizational commitment and job satisfaction.

The main objective of this thesis is to add to the body of knowledge on the HR practices and attitudes connection, by attempting to explain how context (human, social and organizational capital) can shape the linkages between perception of HR practices and, organizational commitment and job satisfaction. Specifically, this thesis aims at performing a thorough examination of the role of context in the perception of HR practices and attitudes link for knowledge workers operating inside knowledge intensive firms. Therefore, in order to assist in achieving the purpose of this thesis, it is important to identify the key features of knowledge workers and knowledge intensive companies (Purcell et al., 2009). These characteristics are presented in the next chapter, which discusses earlier studies on knowledge workers and knowledge intensive settings.

CHAPTER 4

Knowledge intensive firms and knowledge workers

4.1. Introduction

This thesis aims at explaining how human, social and organizational capital can influence the interconnections between employees' perception of HR practices and, their organizational commitment and job satisfaction. As previous research highlights the significance of understanding the HR-attitudes connection for knowledge workers inside KIFs (Alvesson, 1995, 2000, 2004; Horwitz et al., 2003; May et al., 2002; Purcell et al., 2009) and, since there is not enough research into this area, this thesis has chosen to study the function of these forms of capital in the interconnections between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction.

As this thesis is attempting to investigate the HR-attitudes connection for knowledge workers who are operating in KIFs, this chapter aims at presenting the key characteristics of knowledge intensive organizations and knowledge workers (Purcell et al., 2009). It starts by defining a knowledge intensive firm and then, explains the central attributes of this type of organization (Alvesson, 1995, 2000; Grant, 1996; Horwitz et al., 2003; Morris and Empson, 1998; Starbuck, 1992; Thomson and Heron, 2002). Subsequently, the chapter delineates the term knowledge worker and elaborates on the main features of this employee group (Alvesson, 1993, 2000; Baron and Hannan, 2002; Frenkel et al., 1995; Hislop, 2008; Horwitz et al., 2003; May et al., 2002; Reed, 1996). Within the section on knowledge workers' attributes, this chapter presents previous work that could assist in understanding the impact of human resource management on this worker grouping (Baron and Hannan, 2002; Cappelli, 1999; Horwitz et al., 2003; Kinnear and Sutherland, 2000; May et al., 2002; Purcell et al., 2009; Thompson and Heron, 2002). Moreover, as knowledge work often necessitates an intensive exercise of knowledge (Alvesson, 2001; Hislop, 2008; Robertson and Swan, 2003), this chapter then sheds some light on earlier studies that have defined types of knowledge that are generally used by organizations and their workers (Cowan et al., 2000; Nonaka,

1994; Saviotti, 1998). In conclusion, a recapitulation of the main points highlighted in this chapter is presented.

4.2. Characteristics of knowledge intensive firms

Knowledge intensive firms are companies that encompass a number of well educated and skilled workers, and involve work that is often described to be of an intellectual nature (Alvesson, 1995, 2000; Morris and Empson, 1998; Starbuck, 1992). Such types of organizations can be seen as firms that integrate the skills and knowledge of highly qualified members (Grant, 1996; Horwitz et al., 2003; Thomson and Heron, 2002). According to Alvesson (2000, p. 1101), KIFs claim ‘to produce qualified objects and/or services, using the knowledge of the personnel as the major resource [and] these claims are typically confirmed by outside groups (such as: clients, business journalists, the public)’. Examples of KIFs include: research and development groups, high-tech firms, law firms, advertising agencies, management consultancy firms and engineering consultancy organizations (Alvesson, 1995). Most knowledge intensive companies function in high pressure and unstable environments, have complex structures (Frenkel et al., 1999), and face the difficult task of managing their workforce (Thomson and Heron, 2002). In effect, one of the main concerns for knowledge intensive firms is to retain their core personnel, which seems to put a high strain on managing the work attitudes of key employees within these organizations (Alvesson, 2000, 2004; Deetz, 1995; Horwitz et al., 2003; Maister, 1982). In that regard, Alvesson (2000) claims that whilst retaining qualified workers is a central problem for most companies, this is a highly significant issue for knowledge intensive organizations. Effectively, inside KIFs, key personnel can be a highly important, and sometimes the only substantial organizational asset (Alvesson, 2000, 2004). This is explained by the fact that KIFs greatly depend on the knowledge and skills of their workers in order to achieve competitive advantage (Lepak and Snell, 2002, 2007; Swart and Kinnie, 2004). In fact, the knowledge and capabilities of a KIF’s employees often play a central function in generating innovative products and/or services that are normally recognized by external entities, such as the customers. Accordingly, such types of companies generally compete amongst each other in terms of attracting and retaining highly qualified personnel (Alvesson, 2000; Maister, 1982). In addition to attracting and retaining key employees, as knowledge

and skills seem to be central for knowledge intensive firms, another challenge that these companies face is the effective development of their knowledge and capabilities (Bowman and Ambrosini, 2000; Horwitz et al., 2003; Youndt et al., 2004). This could involve the embracement of strategic approaches revolving around working structures that allow the development and sharing of knowledge amongst company members (Thomson and Heron, 2002). For instance, many knowledge intensive firms are adopting organizational forms that are characterized by flat hierarchies and decentralized decision-making. These arrangements generally include a project-based structure where tasks and objectives are distributed amongst working teams (Lam, 2005; May et al., 2002). This structure often encompasses high degrees of flexibility, where employees can move amongst teams and where there is frequent rotation of job positions (Alvesson, 1995). According to May et al. (2002), the latter organizational forms can help promoting the transfer of knowledge and can enhance knowledge creation, through co-workers relations. Mainly, project teams can include employees with common and/or different skills and knowledge. Within these teams, interacting members would normally synthesize and communicate critical information in a manner that can refine and/or enhance learning, efficient decision-making and problem solving (Horwitz et al., 2003; Robertson and O'Malley Hammersley, 2000). This organizational design also serves to allow employees to be more creative, by providing them with autonomy in how they apply their knowledge (Morris, 2000); mostly by reducing direct control and command structures (Alvesson, 2000). However, it is important to note that the project-based structure does not always imply that corporate management is giving complete discretion to its workforce, especially in large organizations (May et al., 2002). Control is generally achieved through reward systems that are mainly related to a workers' job performance, and that introduce market pressure inside the organization (ibid). This is largely done because core workers in KIFs are generally perceived as being highly mobile, are often directed towards the external labor market and are particularly attracted by competitive compensation packages (Arthur and Rousseau, 1996; May et al., 2002). This in turn, implies that studying how KIFs could manage their core employees might require a thorough understanding of the characteristics of these workers (Purcell et al., 2009). The features of these key KIFs' employees were investigated in earlier studies and, these workers were distinctively delineated in the literature as knowledge workers (Alvesson, 1995, 2000; Starbuck, 1992). As this

thesis is investigating the influence of human resource management on knowledge workers' organizational commitment and job satisfaction, the next paragraphs present earlier studies that define and elaborate on the main features of the knowledge worker employee group.

4.3. Characteristics of knowledge workers

One could argue that all types of work might require a certain degree of knowledge, which can put some ambiguity over what constitutes knowledge work (Alvesson, 2000; Hislop, 2008). For this reason, scholars have attempted to provide a narrower categorization for knowledge work, one that generally encompasses tasks that necessitate a continuous and intensive exercise of knowledge (Alvesson, 2001; Hislop, 2008; Robertson and Swan, 2003). This work is often thought of as being conducted by highly competent and qualified workers operating on tasks of intellectual nature (Alvesson, 2000). Frenkel et al. (1995) define a knowledge worker as an individual that intensively uses intellectual knowledge and skills, has a high degree of work creativity and possesses a strong theoretical knowledge foundation. Scholars argue that these employees can make use of both their own theoretical knowledge as well as contextual knowledge (Frenkel et al., 1999; Gibbons et al., 1994; May et al., 2002). Examples of knowledge workers include: information technology specialists, software designers (May et al., 2002), advertising workers (Beaumont and Hunter, 2002), scientists and engineers (Beaumont and Hunter, 2002), lawyers (Hunter et al., 2002), consultants (Morris, 2001), and money market dealers (May et al., 2002). The academic literature portrays that knowledge workers are usually in high demand on the job market, are generally known to be well remunerated and as mentioned earlier, are often considered as being highly mobile (Deetz, 1995; Reed, 1996; Reich, 1991; May et al., 2002). These employees tend to spend long hours at work (Deetz, 1995), and generally seek challenging tasks and responsibilities (Alvesson, 2000; May et al., 2002). Vogt (1995) indicates that knowledge workers usually possess high degrees of work motivation and often have the capabilities to generate as well as communicate innovative solutions and ideas. This group of workers commonly needs to continuously renew and/or refine its knowledge and should generally be able to constantly deal with uncertainty and complexity (Alvesson, 1993; Horwitz et al., 2003). Another characteristic for

knowledge workers is their drive to use their creativity, and their eagerness for autonomous and independent work (Horwitz, et al., 2003; May et al., 2002). Moreover, while this worker cluster normally spends long periods of time at work, scholars have interestingly highlighted that due to the high degrees of motivation and autonomy that knowledge workers generally possess, this employee group often does not perceive long working hours as being a major issue in its tasks (Alvesson, 2000; Deetz, 1995).

As indicated previously, studies on the knowledge worker group claim that these employees can represent a central asset for knowledge intensive companies and therefore, knowledge workers often form a significant element in these firms' competitiveness (Alvesson, 1993, 2000; Hislop, 2008; Horwitz et al., 2003; May et al., 2002). In that regard, Lepak and Snell (2002, 2007) emphasize on the value of the latter employees' knowledge, and indicate that their skills and knowledge are generally rare to find on the job market. Consequently, as knowledge workers often constitute a key resource for organizations, authors are highlighting the importance of understanding the influence of HR practices on this employee group (Alvesson, 2004; Lepak and Snell, 2002, 2007; May et al., 2002). Particularly, Alvesson (2004) claims that studying the effect of practices such as recruitment, selection, training and development, and compensation on knowledge workers, could play a significant function in understanding how knowledge based firms can achieve higher levels of success and competitiveness.

The examination of the influence of human resource practices on knowledge workers, often necessitates an understanding of the nature of the relationship between these workers and their employing firm (Baron and Hannan, 2002; May et al., 2002; Thomson and Heron, 2002). In that regard, Reed (1996) claims that knowledge workers possess a comprehensive knowledge base that is difficult to find on the job market. These workers' main focus is to enhance their rare and universal skills in order to aggressively promote their credentials. Consequently, knowledge workers' goals are hardly ever aligned with those of their employing organization, and both management and workers do not anticipate a long-term relationship (Reed, 1996). Indeed, earlier research mentions that knowledge workers usually have no loyalty to one organization (Arthur and Rousseau, 1996), which can result in a weak

company-worker connection (Reed, 1996). Such an argument might undermine the importance of 'high commitment' type of HRM inside knowledge intensive organizations. Nonetheless, May et al. (2002) challenge Reed's (1996) claim and emphasize on the significance of the knowledge worker-company relationship. The central argument here stems from the ground that knowledge workers – particularly in large organizations – would often rely on their employing firm to provide them with resources that are generally required for the fulfillment of their knowledge developmental needs. In effect, Reed's argument assumes that knowledge workers' growth and employability are mainly related to their own esoteric and theoretical knowledge (Reed, 1996). Conversely, Gibbons et al. (1994) mention that both theoretical knowledge and contextual knowledge are required in order to solve customers' complex problems. As May et al. (2002, p. 779) posit, 'while esoteric, abstract and theoretical knowledge is a key feature of knowledge work, contextual knowledge is equally important'. This implies that contextual knowledge can be as important as the theoretical knowledge for knowledge workers (Frenkel et al., 1999). Therefore, these employees might depend on their firms for resources that are necessary for the expansion of their knowledge base and expertise (Alvesson, 2000). As a result, the literature is now stressing on the importance of the dual dependence relationship between knowledge workers and organizations, particularly those who are employed in large organizations (May et al., 2002). The latter relationship can generally be built through employment practices that can influence the attitudes of knowledge workers towards their organization (Alvesson, 2004). Accordingly, this signifies that investigating the impact of 'high commitment' human resource practices on this employee group can indeed, offer valuable insights for both researchers and practitioners. Lepak and Snell (2002, 2007) support this view, as they argue that 'high commitment' HRM could have a chief role inside knowledge companies, since such practices could help retaining key personnel; who possess valuable and rare knowledge. Interestingly, while many studies have examined the attributes of knowledge workers, substantially more empirical work is needed on the links between HR practices and, the organizational commitment and job satisfaction of these workers (May et al., 2002). In view of that, as employee groups' characteristics can help understanding their HR-attitude link (Kinnie et al., 2005; Purcell et al., 2009), the next paragraphs elaborate further on the features of

knowledge workers and discuss means through which firms could manage this employee group.

The literature on knowledge workers clearly emphasizes on the central role of pay for this employee group (May et al., 2002; Reed, 1996). These workers usually aspire for high financial rewards since they generally possess prominent and unique work credentials (Alvesson, 2000). Accordingly, Reed (1996) indicates that most knowledge-intensive companies seek to bring in market pressure into the firm through the use of employment practices such as high compensation or performance-related pay systems. Furthermore, whilst May et al. (2002) argue that Reed's (1996) work ignored knowledge workers in large organizations, their study also found conclusions that highlight the importance of pay for this employee group in large knowledge intensive firms. In both of these studies, pay was a sign of status for knowledge workers as well as a direct implication of their organizational and market value (May et al., 2002; Reed, 1996). In relation with attitudes, Alvesson (1993) argues for the importance of pay (mainly, performance-related pay) in creating a sense of loyalty and commitment for knowledge workers. Moreover, scholars have claimed that knowledge workers' commitment and retention can be enhanced by highly competitive compensation packages (Baron and Hannan, 2002; Horwitz et al., 2003). As well, Purcell et al. (2009) have demonstrated a link between knowledge workers' perception of compensation and their organizational commitment. However, while pay could impact knowledge workers' attitudes, earlier research posits that the satisfaction with the level of pay can be looked upon as a 'table stake' (Boxall and Purcell, 2003; Purcell et al., 2009). This seems to suggest that attitudes might not necessarily increase with augmentations in pay or compensation.

In addition to high compensation, previous studies on knowledge workers indicate that these types of employees often require high levels of job autonomy over their direct work (Alvesson, 1995; Baron and Hannan, 2002; May et al., 2002; Morris, 2000; Thompson and Heron, 2002). Knowledge workers need to feel that they have high degrees of influence over the decisions they make in their high-end jobs, as well as control over how they develop their own knowledge and expertise (Morris, 2000). This employee group's need for job autonomy is generally fulfilled through the creation of work teams where employees can perform high-skill work

along with high levels of influence over their tasks and responsibilities (Alvesson, 1995; May et al., 2002). Within this structure, knowledge workers need to feel that there is a work environment where people are treated more as colleagues than subordinates (Drucker, 1989). In parallel, May et al. (2002) also claim that knowledge workers seek to be involved in company decisions that are related to their work. Similarly, Alvesson (2000) states that knowledge workers need to have control over decisions that are connected to the type of work that they are undertaking. Therefore, it appears that high degrees of job autonomy can constitute an important segment of knowledge workers' psychological contract (Thomson and Heron, 2002). Particularly, scholars have indicated that job autonomy can influence the work attitudes of knowledge workers. Addressing knowledge workers' needs in terms of high levels of autonomy was found to be a high motivating factor for this employee group (Baron and Hannan, 2002; Thomson and Heron, 2002). Furthermore, research results reveal that job autonomy is amongst the most famous retention strategies for knowledge workers (Horwitz, et al., 2003; Kinnear and Sutherland, 2000). Previous empirical findings have also indicated that job autonomy can be one of the most important factors behind the organizational commitment of knowledge workers (Purcell et al., 2009). Additionally, the literature demonstrates the positive role that autonomy in decision-making can have in shaping the job satisfaction of knowledge workers (Kinnear and Sutherland, 2000).

The literature on knowledge workers also emphasizes on the importance of communication for this employee group. In particular, scholars have highlighted that, due to the working structures that are generally implemented within KIFs, top-down communication practices could represent a highly significant factor in the employment relationship and jobs of knowledge workers (Alvesson, 1995; Horwitz et al. 2003; May et al., 2002).

Career opportunities seem to be another central HR practice for knowledge workers (Horwitz, et al., 2003; May et al., 2002). Specifically, researchers claim that knowledge workers seek to have structured career paths and strong promotional opportunities (May et al., 2002). Even though promotional prospects are important for most occupations, studies have demonstrated that this is a key job attribute for

knowledge workers (May et al., 2002). This is because this employee group actively aims to develop its knowledge and expertise through career advancements (Horwitz, 2003), and the continuous enhancement of knowledge workers' credentials seems to play a central role in sustaining and/or enhancing their employability (Cappelli, 1999). However, most project-based organizations are known to have flat organizational hierarchies and little support for career development, which might have a negative impact on knowledge workers' job expectations and work attitudes. For instance, in May et al. (2002) study, promotional prospects were ranked as the third most important job aspect of knowledge workers. However, the lack of clear career ladders in the latter research resulted in few employees being satisfied with this practice, which led to unmet work prospects.

Conversely, while many knowledge based firms do not seem to support the career development of their workforce, most of these companies offer training and developmental courses for their workers (Horwitz et al., 2003). As mentioned previously in this chapter, knowledge workers' have a constant drive to develop their knowledge and skills, since this can ensure their employability on the external job market (Cappelli, 1999). Interestingly however, evidence shows that knowledge workers commonly view training as a somewhat insignificant learning resource (Purcell et al., 2009). In fact, it appears that the characteristics of the job, as well as the feature of relationships with fellow employees, can rather help knowledge workers in advancing their knowledge and skills, more than training programs (May et al., 2002).

In particular, challenging work seems to contribute to the enhancement of knowledge workers' skills and knowledge. Scholars indicate that the prospects to work on challenging jobs can be a central part of the learning and development process of knowledge workers (Purcell et al., 2009). Therefore, these employees generally need to be constantly exposed to intricate work so that they can ensure the continuous development of their abilities to solve complex problems (Alvesson, 2000; Horwitz et al., 2003). This in turn, can allow them to keep a competitive level of knowledge and capabilities, which can assure their employability within their organization and in external job markets (Cappelli, 1999). In addition to job challenge, the nature of the work being conducted can also affect this employee

group's knowledge development (Horwitz et al., 2003). Indeed, Alvesson (2000) claims that knowledge workers generally seek to fulfill their professional needs through specific types of jobs and responsibilities (Alvesson, 2000; Alvesson and Willmott, 2002; Hatch and Schultz, 2002). Therefore, it is not surprising that Baron and Hannan (2002) have found that the nature of work can enhance the organizational loyalty of knowledge workers. As well, it appears that the nature of work can impact the work attitudes of this employee cluster (Kinnear and Sutherland, 2000; Purcell et al., 2009).

As indicated earlier, it seems that social relationships at work can as well, play a role in the knowledge and skills development of knowledge workers (May et al., 2002). The jobs performed by this employee cluster can often require high degrees of creativity and, a strong knowledge and ability to deal with complexity and uncertainty (Alvesson, 1993; Horwitz et al., 2003). Researchers posit that the enhancement of such types of knowledge and capabilities commonly requires high levels of knowledge sharing amongst organizational members (Roberson and O'Malley Hammersley, 2000; Swan et al, 1999). This transfer of knowledge and skills between employees seems to require strong social relationships at work (May et al., 2002). Accordingly, to strengthen their personal credentials, knowledge workers could rely on systems of social relationships inside their firm or across organizations in their industry (May et al., 2002; Purcell et al., 2009). As knowledge workers' employability (inside their firm or in the outside job market) can be largely dependent on their degree of knowledge and capabilities (Cappelli, 1999), it appears that social relationships at work might have an important influence on the career of this employee group. In addition to employability levels, the chance to interact with motivated and bright people that share similar goals and values, and that contribute to personal knowledge development can assist knowledge workers in performing their jobs (Horwitz et al., 2003). Therefore, as social relationships at work can be an important aspect in knowledge workers' jobs and a key factor behind the development of their work credentials (Horwitz et al., 2003; Kinnear and Sutherland, 2000; May et al., 2002), it seems that social capital might have an influence on this employee group's attitudes. As indicated in chapter 3, HR practices such as selection, performance-related pay, job security, communication and performance appraisal can help building social capital in organizations (Adler and Kwon, 2002;

Kang, et al., 2007; Leana and Van Buren, 1999; Nahapiet and Ghoshal, 1998; Youndt and Snell, 2004; Youndt et al., 2004). Therefore, it appears that such practices can help shaping the attitudes of knowledge workers – through their impact on a firm's social capital.

Whereas social capital might influence the attitudes of knowledge workers, it could be argued as well, that a KIF's organizational capital might have an impact on the attitudes of this employee group. This is because organizational capital, as described in chapter 3, could as well, help enhancing workers' skills and knowledge. Therefore, as skills and knowledge development appears to be important for the careers and jobs of knowledge workers (Alvesson, 2000; Cappelli, 1999), a KIF's organizational capital might affect knowledge workers' attitudes. This indicates that HR practices such as performance-related pay and performance appraisal (which could encourage workers to contribute to their firm's databases, manuals, procedures and the like) (Youndt and Snell, 2004; Youndt et al., 2004), might be connected to knowledge workers' attitudes through their influence on a firm's organizational capital.

Furthermore, as human capital can impact social and organizational capital (Kang et al., 2007; Youndt et al., 2004), this form of capital might have an indirect impact on knowledge workers' attitudes. Therefore, in addition to their possible direct role in affecting knowledge workers' attitudes (by helping in enhancing their knowledge and skills), it seems that HR practices that can influence a firm's human capital can also be indirectly linked to knowledge workers' attitudes through the mechanisms that might connect human capital to knowledge workers' attitudes (i.e. through the possible influence of human capital on social and organizational capital).

In the end, as knowledge seems to be the basis of knowledge intensive firms' success, and was described as a highly prominent factor for knowledge workers (Alvesson, 2000; Horwitz et al., 2003; May et al., 2002; Purcell et al., 2009), it is worth indicating in this chapter, that the knowledge management literature has classified the knowledge used by firms and their workers into different categories (Boh, 2007; Hansen et al., 1999; Nonaka, 1994; Polanyi, 1966). Therefore, before

concluding this chapter, the subsequent section sheds some light on two main types of knowledge (codified and tacit), and presents some earlier work pointing towards the mechanisms through which tacit and codified knowledge could be best gathered and exchanged inside organizations.

4.4. The tacit and codified types of knowledge

In their attempts to categorize knowledge, scholars have classified knowledge depending on the degree to which it can be articulated and captured in documents (Boh, 2007; Cowan et al., 2000; Nonaka, 1994; Saviotti, 1998). Within this classification, two categories of knowledge can be distinguished: codified and tacit knowledge (Cowan et al., 2000; Nonaka, 1994). Codified knowledge is defined as knowledge ‘that is transmittable in formal and systematic language’ (Nonaka, 1994, p. 160), and that is scripted and captured in processes, libraries, manuals, databases and the like (Cowan et al., 2000; Nonaka, 1994; Saviotti, 1998). Conversely, Nonaka (1994, p. 16) classifies tacit knowledge as knowledge that ‘has a personal quality, which makes it hard to formalize and communicate’. This type of knowledge is more difficult to be captured and scripted in documents, processes, databases and manuals (Boh, 2007; Cowan et al., 2000; Spender, 1996). Tacit knowledge encompasses two main aspects: cognitive and technical (Nonaka, 1994). The cognitive aspect revolves around mental forms that comprise beliefs, standpoints and representations, which can assist individuals in delineating and perceiving the world around them (Johnson-Laird, 1983; Nonaka, 1994). On the other hand, the technical aspect of tacit knowledge includes ‘concrete know-how, crafts and skills that apply to specific contexts’ (Nonaka, 1994, p. 16).

While research has distinguished between tacit and codified knowledge, it appears that these two types of knowledge can be most effectively understood and transferred through different mechanisms inside organizations (Boh, 2007; Hansen et al., 1999; Laursen and Mahnke, 2001; Nonaka, 1994; Subramaniam and Youndt, 2005). In particular, scholars have argued that tacit knowledge could generally be best exchanged and understood through social relationships and interactions between organizational members (Boh, 2007; Gertler, 2003; Hansen et al., 1999; Laursen and Mahnke, 2001; Nonaka, 1994; Preece, 2003; Scheepers et al., 2004). Because of its

nature, tacit knowledge can be largely connected to the people who hold this knowledge (Boh, 2007). As Polanyi (1966) puts it, tacit knowledge has a personal characteristic and can be largely embedded in the human body and mind. Moreover, as tacit knowledge might not always be easily communicated and articulated (Polanyi, 1966), it might be difficult for its holder to script it in clear and comprehensible language inside documents (Boh, 2007; Nonaka, 1994). Therefore, scholars argue that the understanding and transfer of tacit knowledge could be most effectively achieved when it is exchanged in relationships among individuals (Hansen et al., 1999; Nonaka, 1994; Prencipe and Tell, 2001). Developing and transferring tacit knowledge requires a constant and continuous effort of learning through flexible interactions and communication amongst individuals, in order to come up with a common understanding (Bateson, 1973; Nonaka, 1994). According to Nonaka (1994; p. 17), ‘this understanding involves a kind of ‘parallel processing’ of the complexities of current issues, as the different dimensions of a problem are processed simultaneously’.

On the other hand, by its nature, codified knowledge is scripted and therefore, it seems that documents can best help in the usage and sharing of this type of knowledge (Hansen et al., 1999; Scheepers et al., 2004; Subramaniam and Youndt, 2005). Particularly, inside companies, codified knowledge is most often accumulated in an organization’s procedures, databases, patents and manuals (Nelson and Winter, 1982; Subramaniam and Youndt, 2005). This codified knowledge that is stored in a company’s organizational capital is commonly scripted in clear and systematic ways, within well-determined parameters and, is generally easily accessible and often seen as highly reliable (Brown and Duguid, 1991; Subramaniam and Youndt, 2005; Youndt and Snell, 2004). Consequently, scholars have argued that organizational capital can form the most efficient means of exchanging and developing codified knowledge inside businesses (Boh, 2007; Subramaniam and Youndt, 2005). For this reason, when employees need to use and have access to codified knowledge, they generally rely on their firm’s organizational capital (Hansen et al., 1999; Youndt et al., 2004).

4.5. Conclusion

This thesis aims at explaining how human, social and organizational capital can help shaping the linkages between perception of HR practices and, the organizational commitment and job satisfaction of knowledge workers operating in knowledge intensive organizations. Therefore, as this thesis is examining the HR-attitudes connection in KIFs, this chapter has shed some light on the characteristics of knowledge intensive settings (Alvesson, 1995, 2000; Grant, 1996; Horwitz et al., 2003; Morris and Empson, 1998; Starbuck, 1992; Thomson and Heron, 2002). Furthermore, as an employee group's key features can assist in understanding how HR practices can impact its work attitudes (Kinnie et al., 2005; Purcell et al., 2009), and since this thesis is investigating knowledge workers, this chapter has elaborated on the main attributes of this employee cluster (Alvesson, 1993, 2000; Baron and Hannan, 2002; Frenkel et al., 1995; Hislop, 2008; Horwitz et al., 2003; May et al., 2002; Reed, 1996). In parallel, in order to have a more comprehensive view of the impact of HR practices on knowledge workers' attitudes, this chapter has presented some insights, from earlier research, on the influence of HR practices on knowledge workers (Baron and Hannan, 2002; Horwitz et al., 2003; Kinnear and Sutherland, 2000; May et al., 2002; Purcell et al., 2009; Thompson and Heron, 2002).

In conclusion, this chapter along with the previous two chapters has covered earlier academic studies pertinent to this thesis main objective. The subsequent chapter will outline the research framework of this thesis. This is mainly done through a comprehensive description of the key theoretical points presented in chapters 2, 3 and 4. The next chapter also identifies the main gaps that are present in previous research and concludes by highlighting the analytical steps that are followed in this thesis in order to more thoroughly address its research questions.

CHAPTER 5

Research Framework

5.1. Introduction

This thesis is interested in studying the role of human, social and organizational capital in the HR practices-attitudes link. Specifically, the main objective of this thesis is to explain the function that these forms of capital could have in the interconnections between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction. The main purpose of this chapter is to outline the research framework of this thesis. The following paragraphs in this introductory section reintroduce the theoretical background behind this thesis's main objective. Subsequently, section 5.2 addresses this thesis's research questions through a comprehensive description of the previous studies that were presented in chapters 2, 3 and 4. After discussing earlier research pertinent to this thesis's research questions, this chapter introduces the main analytical steps that are employed in this thesis in order to further address these questions.

The HRM literature has highlighted the significance of studying the HR-attitudes connection by positing that HRM can impact organizational performance through its influence on workers' attitudes (mainly, organizational commitment and job satisfaction) (Appelbaum et al., 2000; Boselie et al., 2005; Macky and Boxall, 2007; Purcell et al., 2003, 2009; Whitener, 2001). While an increasing number of scholars have researched the effect of HRM on organizational commitment and job satisfaction (Chang, 2005; Gould-Williams, 2004; Meyer and Smith, 2000; Paul and Anantharaman, 2003; Purcell et al., 2003; Whitener, 2001; Wright et al., 2003), it appears that additional work is needed in order to have a more thorough understanding of 'why' and 'how' these linkages can exist (Chang, 2005). This thesis aims at contributing to the HR-attitudes connection by attempting to offer more knowledge into 'why' and 'how' HR practices can be connected to organizational commitment and job satisfaction.

Earlier studies provide some insights that direct researchers towards means that could assist in explaining how human resource management can be connected with workers' commitment and job satisfaction. To obtain more in-depth knowledge onto the HR-attitudes link, researchers posit that there is a need to examine the actual presence of human resource policies in practice (Kinnie et al., 2005; Wright and Boswell, 2002; Wright and Nishii, 2004). Scholars have also highlighted that in thorough investigations of the HR-attitudes connection, it is essential to consider workers' perception of HR practices, rather than the very existence of these practices (Chang, 1999, 2005; Gartner and Nollen, 1989; Gould-Williams, 2004; Kinnie et al., 2005; Macky and Boxall, 2007; Meyer and Smith, 2000; Purcell et al., 2003, 2009; Wright and Nishii, 2004). Furthermore, while the features of worker clusters were neglected in most HR-attitudes studies, some researchers have demonstrated that the characteristics of employee groups could help shaping the linkages between employees' perception of HR practices and their work attitudes (Kinnie et al., 2005; Purcell et al., 2009).

Interestingly, the attributes of worker groupings could represent examples of contextual influences (Clinebell and Shadwick, 2005; Rousseau, 1978). Therefore, if the features of employee groups could affect the HR-attitudes link, this might mean that the characteristics of contextual factors can help shaping this connection. Support for this claim is present in research on the HR-performance link. Scholars in the HR-performance literature are now emphasizing that the attributes of elements from the organizational context could affect the HR-performance connection (Becker and Huselid, 2006; Michie and West, 2004). Accordingly, as the influence of HR practices on performance can occur through workers' attitudes (Arthur, 1994; Boxall and Purcell, 2003; Gerhart, 2004; Wood and de Menezes, 1998; Wright and Nishii, 2004), it might be that the characteristics of context could also impact the HR-attitudes connection. Nonetheless, while researchers have offered some valuable knowledge that could help in understanding 'why' and 'how' HR practices can be linked to attitudes, there are few studies that have considered the function that contextual elements could have in the HR-attitudes link. Whereas there are some insights on the role of worker clusters' features (Kinnie et al., 2005; Purcell et al., 2009), factors from the context of organizations within which employees operate were somewhat neglected in previous research on the HR-attitudes connection.

However, if contextual elements could have a function in the HR-attitudes link, then accounting for elements from the context of firms where employees are working seems necessary for a more in-depth understanding of the influence of HR practices on attitudes.

As accounting for factors from the context of firms where employees operate might add to the body of knowledge on the HR-attitudes link, this thesis is interested in understanding how these contextual elements can affect the interactions between perception of HR practices and, organizational commitment and job satisfaction. Whereas there could be many factors in the context of organizations where workers operate, this thesis focuses on studying the following contextual elements: human, social and organizational capital. There are insights in previous studies suggesting that these contextual factors might be affected by perception of HR practices (Chang, 1999, 2005; Kang et al., 2007; Leana and Van Buren, 1999; Meyer and Smith, 2000; Youndt and Snell, 2004; Youndt et al., 2004). Moreover, the examination of the literature seems to provide some indications that lead to argue that these forms of capital can perhaps have an influence on employee attitudes (Leana and Van Buren, 1999; Nahapiet and Ghoshal, 1998; Purcell et al., 2009). Accordingly, these contextual factors might have a function in between perception of HR practices and attitudes. Nonetheless, very few studies have considered human, social and organizational capital when investigating the impact of HR practices on workers' attitudes.

In particular, this thesis aims at studying how human, social and organizational capital can affect the interconnections between perception of HR practices and attitudes in knowledge intensive organizations. This is because the attitudes of core employees in KIFs seem to have a key function in the success and competitiveness of these organizations (Alvesson, 1995, 2000; Deetz, 1995). This thesis investigates the perception of HR-attitudes link for these core employees, which form the majority of the workforce in knowledge intensive companies and that are commonly defined in the literature as knowledge workers (Alvesson, 1995, 2000; Deetz, 1995; Frenkel et al., 1995; Hislop, 2008). While knowledge workers can occupy different positions inside an organization, this thesis is examining knowledge workers in positions of key responsibility – formal responsibility over key factors

inside project teams and/or work divisions. There are little insights about the HR-attitudes link of knowledge workers in such positions and yet, these employees could potentially play significant roles inside knowledge intensive firms.

In addressing its key objective this thesis attempts to answer the following primary research question:

How does human, social and organizational capital influence the interactions between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction?

5.2. Understanding the role of human, social and organizational capital in the interconnections between knowledge workers' perception of HR practices and their attitudes: insights from previous studies

In answering this thesis primary research question there is a need to address a series of secondary questions:

How can we explain the interactions between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction?

How can we explain the connections between knowledge workers' perception of HR practices and, human, social and organizational capital?

How can we explain the impact of human, social and organizational capital on knowledge workers' organizational commitment and job satisfaction?

Based on the studies presented in the earlier literature review chapters, subsections 5.2.3, 5.2.4 and 5.2.5 will discuss and attempt to answer these secondary research questions. Prior to that and to help in this effort, subsections 5.2.1 and 5.2.2 will respectively describe the main features of human, social and organizational capital, as well as the attributes of knowledge workers and KIFs (by recapitulating on previous studies from chapters 3 and 4).

5.2.1. The characteristics of human, social and organizational capital

In order to help examine the role that human, social and organizational capital could have within the perception of HR practices and attitudes connection it is essential to understand the main characteristics of these forms of capital. Chapter 3 has pointed towards previous research which offers insights that could help in understanding the central features of human capital. Mainly, scholars distinguish between different types of human capital, depending on their value and uniqueness to the firm, such as:

generic, company-specific, industry-specific and occupation-specific (Lepak and Snell, 1999; Swart, 2006). Generic human capital could be described as a more common form of human capital and, represents knowledge and skills that individuals have acquired from sources other than their organization (Swart, 2006). This type of human capital can be rather easily transmitted amongst firms. Company-specific human capital encompasses the firm-specific knowledge that employees possess and is described as being more unique and less transferable than generic human capital (ibid). This type of human capital is often of high value for the organization and can enhance a firm's competitiveness (Swart et al., 2003; Valcour and Snell, 2002). In relation to the industry-specific (in-depth knowledge in a particular industry) and occupation-specific (knowledge pertinent to a certain occupation) human capital, these are both theoretical and tacit and, their value could lie in the years of practice and experience needed in order for them to be developed (Tallman et al., 2004).

Previous research also offers valuable knowledge into the features of social capital (Burt, 1997; Coleman, 1990; Leana and Van Buren, 1999; Nahapiet and Ghoshal, 1998; Youndt et al., 2004). As explained in chapter 3, social relations between individuals are often perceived as the foundation of social capital (Adler and Kwon, 2002). Nonetheless, while most scholars agree on the basis of social capital, the unit of analysis within which these relationships occur varies in the academic literature (Burt, 1992; Coleman, 1990; Leana and Van Buren, 1999; Nahapiet and Ghoshal, 1998; Putnam, 1993; Swart, 2006). This thesis is interested in examining social capital inside organizations and accordingly, in defining the components of this construct, it mainly relies on the work of Leana and Van Buren (1999) – which is one of the most recognized studies that have addressed social capital within firms. For Leana and Van Buren the core elements of social capital inside organizations are: associability and trust (Leana and Van Buren, 1999). Associability refers to employees' willingness and ability to agree on collective goals, and workers' readiness and capability to reach these common objectives, through collective action (Leana and Van Buren, 1999). In relation to trust, this variable can represent both an antecedent and an outcome of collective work and action (Leana and Van Buren, 1999; Nahapiet and Ghoshal, 1998). As explained in chapter 3, Leana and Van Buren (1999) emphasize that strong systems of social relationships inside firms are mostly built through the existence of resilient rather

than fragile trust amongst workers. Subsequent to presenting the key components of social capital inside organizations, it is important to highlight that, inside business entities, this construct could play a key function in the exchange and development of employees' knowledge and skills (Adler and Kwon, 2002; Hansen et al., 1999; Kostova and Roth, 2003; Leana and Van Buren, 1999; Nahapiet and Ghoshal, 1998; Youndt and Snell, 2004; Youndt et al., 2004). Social capital could represent a significant knowledge asset, as it is generally maintained within the firm even when certain employees decide to depart from their organization (Subramaniam and Youndt, 2005; Youndt et al., 2004).

Earlier studies have as well, highlighted the central features of organizational capital. As described in chapter 3, this contextual element represents knowledge that is owned by the organization and that does not reside in employees or social relations (Youndt et al., 2004). Organizational capital is characterized by codified knowledge that is stored in a firm's procedures, structures, databases, manuals and patents (Youndt et al., 2004). This form of capital can assist workers in quickly accessing structured and reliable information that is pertinent to their work (Hansen et al., 1999; Subramaniam and Youndt, 2005; Youndt et al., 2004). Accordingly, one of the main features of organizational capital is that it could help employees in developing their knowledge (Subramaniam and Youndt, 2005; Youndt and Snell, 2004).

5.2.2. The characteristics of knowledge workers and knowledge intensive firms

Earlier research posits that the features of employee groups can help shaping the linkages between their perception of HR practices and their attitudes (Kinnie et al., 2005; Purcell et al., 2009). Moreover, Purcell et al. (2009) claim that a more thorough investigation of the HR-attitudes connection in knowledge based settings requires that scholars examine the features of KIFs. Therefore, in addressing this thesis objective it is important to understand the key characteristics of knowledge workers and knowledge intensive firms.

As elaborated in chapter 4, earlier research provides valuable insights on the characteristics of knowledge intensive firms and knowledge workers. KIFs were described by scholars as companies that normally operate in unstable and high

pressure environments, and as firms that often view the knowledge and skills of their key personnel as being a highly significant (and at times, the most substantial) organizational asset (Alvesson, 2000, 2004; Deetz, 1995; Frenkel et al., 1999; Horwitz et al., 2003; Maister, 1982; Thomson and Heron, 2002). The latter factor highlights the importance of successfully managing the work attitudes of key employees inside knowledge intensive firms (Alvesson, 2000, 2004). Moreover, as skills and knowledge can be of great importance for KIFs, these types of companies generally embrace organizational forms that aim at effectively developing their knowledge and capabilities (Alvesson, 1995; Horwitz et al., 2003; Lam, 2005; Youndt et al., 2004). This is generally achieved through flat hierarchies and decentralized decision-making, project-based structures, high degrees of flexibility and rotating employees among different job positions (May et al., 2002; Thomson and Heron, 2002).

In relation to knowledge workers and as detailed in chapter 4, this employee cluster is characterized by a continuous drive for knowledge and skills development (Alvesson, 1993; Cappelli, 1999; Horwitz et al., 2003). Knowledge workers are also described as being highly mobile and scholars point that these employees often perceive that their knowledge and expertise are in high demand in the external job market (Arthur and Rousseau, 1996; Reed, 1996). Hence, this worker group normally recognizes the value of its skills and knowledge, and accordingly, often seeks high pay and adequate remuneration in comparison with similar positions in the external job market (Alvesson, 2000; May et al., 2002; Reed, 1996). Another key feature of knowledge workers is their need for high levels of freedom over how they expert their own expertise and knowledge (Alvesson, 1995; Baron and Hannan, 2002; May et al., 2002; Morris, 2000; Thompson and Heron, 2002). In addition to their aspirations for autonomy, knowledge workers are generally highly interested in promotional opportunities and job movements (May et al., 2002). These employees commonly feel that such career prospects could help them in developing their knowledge and abilities and consequently, can play a major role in enhancing their employability (Cappelli, 1999; Horwitz et al., 2003; May et al., 2002; Reed, 1996). Interestingly however, while this employee group highly aspires for the enhancement of its skills and knowledge, it normally does not view training programs as playing a significant function in its growth and development; the advancement of these

employees' knowledge and skills seems to be mostly achieved through opportunities to work on different challenging jobs and through the presence of strong social relationships at work (Alvesson, 2000; Horwitz et al., 2003; May et al., 2002; Purcell et al., 2009; Roberson and O'Malley Hammersley, 2000; Swan et al., 1999). Furthermore, knowledge workers are highly attached to their profession and commonly seek to realize their professional needs by working on specific tasks and responsibilities (Alvesson, 2000; Alvesson and Willmott, 2002; Hatch and Schultz, 2002). Another attribute of knowledge workers is that they generally acknowledge the intense requirements and high demands that are associated with their working tasks (Alvesson, 2000). Moreover, researchers claim that due to the high motivation that knowledge workers have towards their job as well as the high levels of autonomy that these employees often possess, they generally do not view long working hours as being 'problematic' (Alvesson, 2000; Deetz, 1995, p. 146).

5.2.3. The interactions between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction

The main purpose of this thesis is to investigate the influence of human, social and organizational capital on the interconnections between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction. In order to have a more comprehensive understanding of the impact of these contextual variables, it is perhaps helpful to firstly explain – while not considering the function of context – the linkages that could exist between this employee group's perception of HR practices and, its organizational commitment and job satisfaction.

As indicated in chapter 2, HR practices can often send messages portraying the extent to which a firm values, supports and fairly treats its workforce, and workers' organizational commitment can be shaped by how they perceive these messages (Chang, 2005; Hutchison and Garstka, 1996; Macky and Boxall, 2007; Meyer and Allen, 1997; Purcell et al., 2003, 2009; Wayne et al., 1997). Furthermore, human resource practices could project signals indicating the degree to which a company is fulfilling its employees' key job aspirations and is supporting the development of its workforce, and employees' job satisfaction can be influenced by how they perceive these signals (Clark, 1996; Locke, 1976; Macky and Boxall,

2007; Purcell et al., 2003; Roberts and Roseanne, 1998). Nonetheless, while such insights from earlier studies provide key knowledge that can assist in explaining the linkages between perception of HR practices and attitudes, recent studies have demonstrated that the attributes of employee groups can help shaping these interconnections (Kinnie et al., 2005; Purcell et al., 2009). This implies that diverse worker clusters could have different reactions towards HR practices (Purcell et al., 2009). Accordingly, to obtain a more in-depth understanding of the impact of knowledge workers' perception of HR practices on their organizational commitment and job satisfaction, it is important to account in this examination for the key features of this employee group.

In investigating the interconnections between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction, this thesis focuses on human resource practices that were most commonly coined by scholars as 'high commitment' HR practices, these are: selection (which focuses on high selectivity in hiring), compensation (competitive pay, performance-based compensation and profit sharing), job security, communication (where management aims at keeping the workforce informed about company strategies, plans and performance), performance appraisal (that provides constructive advice and developmental evaluations), career opportunities (that links promotion to performance and that gives priority to employees over external candidates when filling in vacant internal positions), job autonomy, training (that aims at enhancing workers' current and future developmental needs) and work-life balance (Boselie et al., 2005; Chang, 2005; Gould-Williams, 2004; Huselid, 1995; Kinnie et al., 2005; Meyer and Smith, 2000; Paul and Anantharaman, 2003; Purcell et al., 2003, 2009; Whitener, 2001; Wright et al., 2003). Based on previous research, figure 5.1 and table 5.1 outline, for each of these HR practices, the connection that knowledge workers' perception of this practice is expected to have with their organizational commitment and job satisfaction. These expected interconnections are discussed in the following subsections.

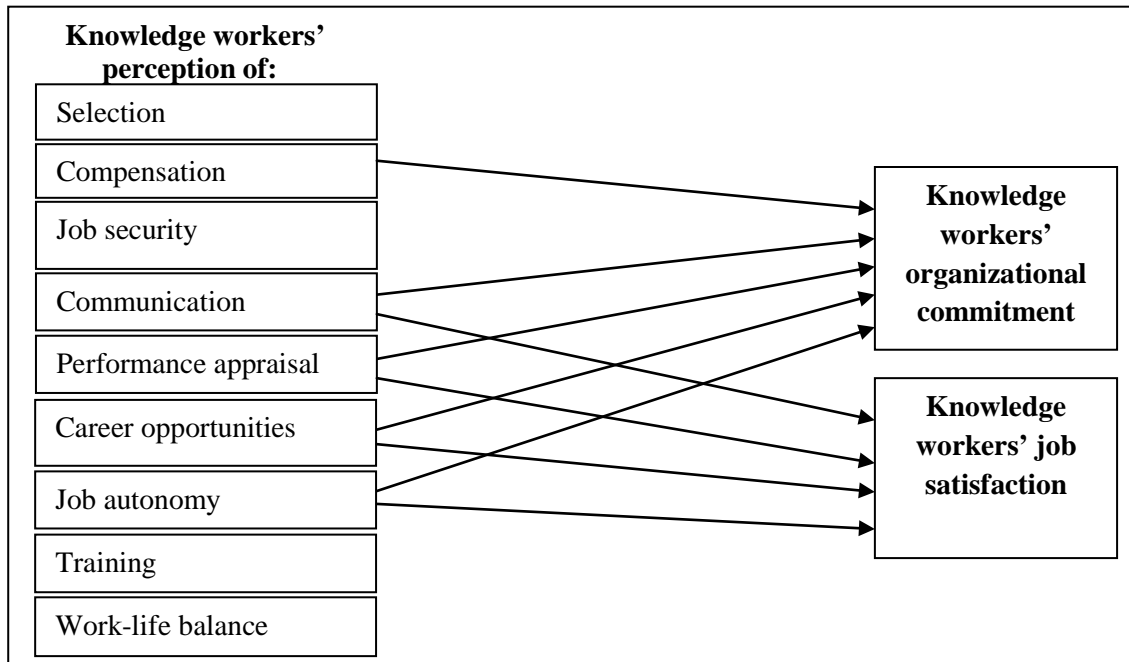


Figure 5.1: The interconnections between knowledge workers’ perception of HR practices and, their organizational commitment and job satisfaction – without accounting for the role of human, social and organizational capital.

Perceived HR practice	Expected connection with knowledge workers’ attitudes	Main supporting literature
<i>Selection</i>	-No likely connection with organizational commitment. -No likely connection with job satisfaction.	Horwitz et al., 2003; May et al., 2002.
<i>Compensation</i>	-Likely impact on organizational commitment. -No likely connection with job satisfaction.	Alvesson, 1993, 2000; Baron and Hannan, 2002; Chang, 2005; Gould-Williams, 2004; Horwitz et al., 2003; Macky and Boxall, 2007; May et al., 2002; Purcell et al., 2003, 2009; Reed, 1996.
<i>Job security</i>	-No likely connection with organizational commitment. -No likely connection with job satisfaction.	Arthur and Rousseau, 1996; May et al., 2002; Reed, 1996.
<i>Communication</i>	-Likely impact on organizational commitment. -Likely impact on job satisfaction.	Alvesson, 1995; Gould-Williams, 2004; Horwitz et al. 2003; Macky and Boxall, 2007; May et al., 2002; McElroy, 2001; Purcell et al., 2003.

Perceived HR practice (continued)	Expected connection with knowledge workers' attitudes	Main supporting literature
<i>Performance appraisal</i>	-Likely impact on organizational commitment. -Likely impact on job satisfaction.	Alvesson, 1993; Chang, 2005; Horwitz et al., 2003; Macky and Boxall, 2007; Purcell et al., 2003.
<i>Career opportunities</i>	-Likely impact on organizational commitment. -Likely impact on job satisfaction.	Cappelli, 1999; Gartner and Nollen, 1989; Horwitz, et al., 2003; Macky and Boxall, 2007; May et al., 2002; Meyer and Smith, 2000.
<i>Job autonomy</i>	-Likely impact on organizational commitment. -Likely impact on job satisfaction.	Baron and Hannan, 2002; Horwitz, et al., 2003; Kinnear and Sutherland, 2000; Purcell et al., 2003, 2009; Thomson and Heron, 2002.
<i>Training</i>	-No likely connection with organizational commitment. -No likely connection with job satisfaction.	Horwitz et al., 2003; May et al., 2002; Purcell et al., 2009; Thomson and Heron, 2002.
<i>Work-life balance</i>	-No likely connection with organizational commitment. -No likely connection with job satisfaction.	Alvesson, 2000; Deetz, 1995.

Table 5.1: The expected connections between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction – without accounting for the role of human, social and organizational capital.

5.2.3.1. Knowledge workers' perception of selection and, their organizational commitment and job satisfaction

Selection was highlighted in earlier studies as representing an essential part of high commitment HR practices' lists (Boselie et al., 2005; Purcell et al., 2003; Wright et al., 2003). Researchers on the HR-attitudes link posit that workers' perception of selection might enhance their organizational commitment and job satisfaction (Purcell et al., 2003). Extensive selection practices could result in the hiring of high quality employees, which could assist in the development of workers' skills and knowledge (Huselid, 1995). Accordingly, such practices can be perceived by workers as supporting the development of their work credentials. Interestingly however, while the selection of highly skilled and knowledgeable workers was emphasized as being a central factor for a KIF (Alvesson, 2000; Baron and Hannan, 2002; Horwitz et al., 2003), there is little evidence – in the literature on HR and

knowledge workers' attitudes – that provides support for a linkage between selection and this employee group's attitudes (Horwitz et al., 2003; May et al., 2002). While previous studies do not provide a clear explanation as to why employee selection does not seem to influence knowledge workers' attitudes, this lack of connection might perhaps be explained by the features of this employee group. In particular, there are little indications in the literature pointing that the mere presence of highly knowledgeable and skilled colleagues can help knowledge workers in developing their credentials. Mainly, it is the strong co-workers relations and the features of the job that were often highlighted as being central factors behind the growth and development of knowledge workers (Alvesson, 2000; Horwitz et al., 2003; May et al., 2002; Roberson and O'Malley Hammersley, 2000). Therefore, it might be that knowledge workers perceive support for the development of their knowledge from the nature of their jobs and the specific character of the social relationships inside their firm, more than the selection of highly skilled and knowledgeable candidates.

In sum, from the examination of earlier studies on knowledge workers (Horwitz et al., 2003; May et al., 2002), it is not expected that there will be a likely connection between this employee group's perception of selection and, its organizational commitment and job satisfaction.

5.2.3.2. Knowledge workers' perception of compensation and, their organizational commitment and job satisfaction

Earlier research on the HR-attitudes link has demonstrated that workers' perception of compensation is positively related to their organizational commitment and job satisfaction (Chang, 2005; Gould-Williams, 2004; Macky and Boxall, 2007; Purcell et al., 2003, 2009). 'High commitment' compensation practices can help increasing workers' attitudes, as they often portray a firm's fair treatment and its dedication towards achieving its workforce's wellbeing and job aspirations (Chang, 2005; Meyer and Smith, 2000). In relation to knowledge workers, scholars claim that this employee group recognizes the value of its knowledge and expertise. Therefore, this worker cluster often expects to receive a high pay and an adequate compensation in comparison with similar positions in the external job market (Alvesson, 1993, 2000; May et al., 2002; Reed, 1996). Consequently, scholars posit that compensation could help increase the organizational commitment of knowledge workers (Alvesson,

1993; Baron and Hannan, 2002; Horwitz et al., 2003). Furthermore, Purcell et al. (2009) have demonstrated a positive association between knowledge workers' perception of financial compensation and their organizational commitment. Therefore, based on previous research in the HR-attitudes literature and particularly, studies on HR and the attitudes of knowledge workers, it could be expected that when knowledge workers perceive that they are receiving a high pay and a compensation that is comparable to industry standards this could help enhance their organizational commitment.

Conversely, the literature on job satisfaction highlights that this construct is generally influenced by the extent to which workers perceive that their key job aspirations and developmental prospects are met in their work environment (Clark, 1996; Locke, 1976; Roberts and Roseanne, 1998). However, compensation does not seem to be a central job aspiration for knowledge workers. In performing its job, this worker group seems to mainly aspire for interesting work, strong social relations, job autonomy and job challenge (Horwitz et al., 2003; May et al., 2002; Thomson and Heron, 2002). Accordingly, knowledge workers' perception of compensation is not expected to have a notable impact on their level of job satisfaction.

5.2.3.3. Knowledge workers' perception of job security and, their organizational commitment and job satisfaction

There is research evidence demonstrating that employees' perception of job security is positively linked with their organizational commitment and job satisfaction (Chang, 2005; Gartner and Nollen, 1989; Purcell et al., 2003, 2009). Job security could reflect that the firm supports the employment and careers of its workers (Chang, 2005). Moreover, job security was portrayed in earlier studies as being amongst workers' key job aspirations (Brooke et al., 1988; Tetrick and LaRocco, 1987). Nonetheless, studies on knowledge workers appear to have commonly undermined the value of job security for this employee cluster (Arthur and Rousseau, 1996; Reed, 1996). It seems that knowledge workers often believe that their credentials are in high demand in the external job market (Arthur and Rousseau, 1996; Reed, 1996). Accordingly, these workers might perhaps not feel the need to rely on job security in order to maintain an employment. Moreover, job security was not found to be amongst knowledge workers' key job aspirations (May et al., 2002).

Therefore, based on earlier studies on knowledge workers, this employee group's perception of job security is not expected to have a likely connection with its organizational commitment and job satisfaction.

5.2.3.4. Knowledge workers' perception of communication and, their organizational commitment and job satisfaction

Scholars studying the HR-attitudes connection indicate that workers' perception of communication is positively related to their organizational commitment and job satisfaction (Gould-Williams, 2004; Macky and Boxall, 2007; Purcell et al., 2003). When management provides constant company-level communication this can enhance workers' attitudes as this could portray the fairness of an employment relationship and, can play a significant role in assisting employees in using and developing their work credentials (Macky and Boxall, 2007; McElroy, 2001). Earlier studies on knowledge workers indicate that due to the organizational structures that are often adopted in knowledge intensive firms (such as, team-based structures) communication between senior management and the workforce is important for the development of the employment relationship (Alvesson, 1995; May et al., 2002). Moreover, extensive communication between upper management and knowledge workers has been portrayed as being a significant element in the jobs of this employee group (Horwitz et al. 2003). Therefore, from the examination of earlier studies on knowledge workers and the HR-attitudes connection, it can be expected that when knowledge workers perceive constant top-down company-level communication this could help increase their organizational commitment and job satisfaction.

5.2.3.5. Knowledge workers' perception of performance appraisal and, their organizational commitment and job satisfaction

The HR-attitudes literature demonstrates that employees' perception of performance appraisal is positively linked to their organizational commitment and job satisfaction (Chang, 2005; Macky and Boxall, 2007; Purcell et al., 2003). Constructive appraisal could enhance employee attitudes as it could project fair treatment from the organization towards its workforce and, can help promoting employees' knowledge and capabilities (Chang, 2005; Macky and Boxall, 2007). While fair employment

relationships could be important for all employee groups, support for knowledge and skills development could be particularly significant for knowledge workers (Alvesson, 1993; Horwitz et al., 2003). Therefore, based on earlier studies on the HR-attitudes connection and knowledge workers, it could be expected that when this employee cluster perceives constructive appraisals in its firm this is likely to help enhance its organizational commitment and job satisfaction.

5.2.3.6. Knowledge workers' perception of career opportunities and, their organizational commitment and job satisfaction

There is research evidence pointing that workers' perception of career opportunities is positively related to their organizational commitment and job satisfaction (Gartner and Nollen, 1989; Macky and Boxall, 2007; Meyer and Smith, 2000). Promotional practices (based on performance) and internal career prospects can increase attitudes as they could project signals of fairness towards the workforce (Macky and Boxall, 2007), and can help fulfilling workers' aspirations for skills and knowledge development (Gartner and Nollen, 1989). In relation to knowledge workers, the literature highlights the importance of career opportunities for this employee group (Cappelli, 1999; Horwitz, et al., 2003; May et al., 2002). Job movements and promotional prospects are one of knowledge workers' central work aspirations (May et al., 2002). Such opportunities can help knowledge workers in enhancing their knowledge and skills, which could assist them in increasing their employability levels (Cappelli, 1999). Accordingly, the examination of previous studies on the HR-attitudes connection and knowledge workers seems to indicate that when this worker grouping perceives internal career prospects and promotion opportunities based on performance this is likely to enhance its organizational commitment and job satisfaction.

5.2.3.7. Knowledge workers' perception of job autonomy and, their organizational commitment and job satisfaction

Earlier studies on the HR-attitudes connection reveal that workers' perception of job autonomy is positively linked to their organizational commitment and job satisfaction (Purcell et al., 2003). Providing employees with influence over their tasks and work decisions can enhance their attitudes as it could project that the firm is recognizing and valuing their work inputs (ibid). Furthermore, job autonomy can

be an important element that workers aspire for when conducting their tasks and responsibilities (Purcell et al., 2003). In relation to knowledge workers, the literature highlights that job autonomy could be a highly significant factor for this employee group. This is because knowledge workers need to feel that they have high degrees of influence and freedom over how they exert and enhance their own knowledge and skills (Alvesson, 1995; Baron and Hannan, 2002; May et al., 2002; Morris, 2000; Thompson and Heron, 2002). Therefore, it is not surprising that earlier studies have found linkages between job autonomy and knowledge workers' attitudes (Horwitz, et al., 2003; Kinnear and Sutherland, 2000; Purcell et al., 2009; Thomson and Heron, 2002). In particular, there is research evidence positively linking job autonomy to knowledge workers' organizational commitment and job satisfaction (Kinnear and Sutherland, 2000; Purcell et al., 2009). Accordingly, the examination of earlier studies on the HR-attitudes connection and knowledge workers appears to point that when this employee group perceives autonomy in its jobs this is likely to increase its organizational commitment and job satisfaction.

5.2.3.8. Knowledge workers' perception of training and, their organizational commitment and job satisfaction

The literature on the link between HRM and employee attitudes indicates that training is positively linked to workers' organizational commitment and job satisfaction (Gartner and Nollen, 1989; Gould-Williams, 2004; McElroy, 2001; Tetrick and LaRocco, 1987). Training and developmental programs can help employees in developing their knowledge and could portray messages of support from the firm towards its workforce (Gould-Williams, 2004; Meyer and Smith, 2000). Nonetheless, while knowledge workers are often keen on enhancing their knowledge and expertise, scholars posit that this employee cluster generally prefers to develop its work credentials while performing its job and through strong co-workers' relations (Horwitz et al., 2003; May et al., 2002; Purcell et al., 2009; Thomson and Heron, 2002). Moreover, there is little evidence in the literature supporting a linkage between training and knowledge workers' attitudes (Purcell et al., 2009). Accordingly, based on earlier studies on knowledge workers, this employee group's perception of training is not expected to have a link with its organizational commitment and job satisfaction.

5.2.3.9. Knowledge workers' perception of work-life balance and, their organizational commitment and job satisfaction

Previous studies on the HR-attitudes link indicate that workers' perception of work-life balance is positively related to their organizational commitment and job satisfaction (Kinnie et al., 2005; Purcell et al., 2003). Work-life balance practices could support workers in doing their jobs and can send messages reflecting the extent to which their firm cares about their wellbeing. Interestingly however, knowledge workers commonly recognize and acknowledge the extensive requirements that are associated with the nature of their high-end jobs (Alvesson, 2000). Furthermore, scholars claim that due to the high degrees of motivation and autonomy that knowledge workers possess, these employees often do not view long hours at work as representing a notable issue in their jobs and careers (Alvesson, 2000; Deetz, 1995). Therefore, based on these features of knowledge workers, it is expected that their perception of work-life balance might not have a connection with their organizational commitment and job satisfaction.

In conclusion and as mentioned throughout subsection 5.2.3, earlier studies on the HR-attitudes link have provided key insights that help explaining the connections between employees' perception of HR practices and, their organizational commitment and job satisfaction (Boxall and Purcell, 2003; Chang, 2005; Gould-Williams, 2004; Kinnie et al., 2005; Macky and Boxall, 2007; Meyer and Smith, 2000; Purcell et al., 2003, 2009; Wayne et al., 1997; Wright et al., 2003). Furthermore, as indicated in subsection 5.2.3, the literature on knowledge workers has presented theoretical arguments that could particularly assist in understanding the linkages between HR practices and this employee group's attitudes (Alvesson, 1993, 1995; Arthur and Rousseau, 1996; Baron and Hannan, 2002; Cappelli, 1999; Deetz, 1995; Horwitz et al., 2003; Kinnear and Sutherland, 2000; May et al., 2002; Morris, 2000; Purcell et al., 2009; Reed, 1996; Thompson and Heron, 2002). Based on this body of knowledge in the HR-attitudes and knowledge workers' literature, subsection 5.2.3 has discussed the possible linkages that could exist between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction. Nonetheless, while earlier studies have offered valuable insights that have helped in understanding these interconnections, it is

necessary to point that the degree of knowledge (in previous studies) on the impact of HR practices on knowledge workers' attitudes is still emerging. There is a small number of studies which have empirically addressed the influence of HR practices on knowledge workers' attitudes (Horwitz, et al., 2003; Kinnear and Sutherland, 2000; Purcell et al., 2009; May et al. 2002). Most importantly, there is little work in the academic literature which has explicitly and thoroughly investigated how knowledge workers' views and perceptions of HR practices can help shaping their work attitudes (Purcell et al., 2009).

After discussing the linkages between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction (without accounting for the function of forms of capital), the following subsections will attempt to explain the influence that human, social and organizational capital could have on these interconnections. Previous research posits that HR practices could impact human, social and organizational capital (Kang et al., 2007; Leana and Van Buren, 1999; Youndt and Snell, 2004; Youndt et al., 2004) and, earlier studies provide indications pointing towards a connection between these forms of capital and workers' attitudes (Leana and Van Buren, 1999; Nahapiet and Ghoshal, 1998; Purcell et al., 2009). Accordingly, to address this thesis main research question it is important to explain the linkages between knowledge workers' perception of HR practices and, human, social and organizational capital. Furthermore, in addressing this thesis primary research question it is essential to understand how these forms of capital could influence knowledge workers' organizational commitment and job satisfaction.

5.2.4. The connections between knowledge workers' perception of HR practices and, human, social and organizational capital

As elaborated in chapter 3 of this thesis, earlier studies argue that certain HR practices can influence a firm's human, social and organizational capital (Adler and Kwon, 2002; Clark, 2003; Dyer and Nobeoka, 2000; Kang, et al., 2007; Leana and Van Buren, 1999; Nahapiet and Ghoshal, 1998; Youndt and Snell, 2004; Youndt et al., 2004). The next subsections will recapitulate on key points from the literature in order to explain the connections that are expected to exist between knowledge

workers' perception of HR practices and these three contextual variables; these anticipated linkages are outlined in the next table.

Expected likely impact	Main supporting literature
Knowledge workers' perception of selection on social capital	Chang, 2005; Gould-Williams, 2004; Leana and Van Buren, 1999; Macky and Boxall, 2007; Purcell et al., 2009; Youndt and Snell, 2004.
Knowledge workers' perception of compensation on social capital	Chang, 2005; Gould-Williams, 2004; Huselid, 1995; Ichniowski et al., 1997; Kang and Snell, 2009; Leana and Van Buren, 1999; MacDuffie, 1995; Macky and Boxall, 2007.
Knowledge workers' perception of job security on social capital	Chang, 2005; Dyer and Noboeka, 2000; Gould-Williams, 2004; Leana and Van Buren, 1999; Macky and Boxall, 2007.
Knowledge workers' perception of communication on social capital	Chang, 2005; Gould-Williams, 2004; Leana and Van Buren, 1999; Macky and Boxall, 2007.
Knowledge workers' perception of performance appraisal on social capital	Chang, 2005; Conway, 1999; Gould-Williams, 2004; Kang et al., 2007; Latham and Wexley, 1981; Leana and Van Buren, 1999; Macky and Boxall, 2007.
Knowledge workers' perception of career opportunities on human capital	Horwitz et al., 2003; Koch and McGrath, 1996.
Knowledge workers' perception of compensation on organizational capital	Chang, 2005; Gould-Williams, 2004; Hansen et al., 1999; Kang and Snell, 2009; Macky and Boxall, 2007; Youndt and Snell, 2004; Youndt et al., 2004.
Knowledge workers' perception of performance appraisal on organizational capital	Chang, 2005; Gould-Williams, 2004; Hansen et al., 1999; Macky and Boxall, 2007; Youndt and Snell, 2004; Youndt et al., 2004.

Table 5.2: The impact of knowledge workers' perception of HR practices on human, social and organizational capital.

5.2.4.1. The impact of knowledge workers' perception of HR practices on social capital

Scholars argue that employee selection could help developing a firm's social capital (Leana and Van Buren, 1999; Purcell et al., 2009; Youndt and Snell, 2004). Selective hiring that accounts for interpersonal characteristics and group-candidate fit could help forming a workforce that has a close 'way of thinking', that works well together and that shares its organization's values (Bigley and Pearce, 1998; Leana and Van

Buren, 1999; McKnight et al., 1998; Purcell et al., 2009). Such influences on a firm's employees could help promoting social capital, as they can enhance trust and workers' ability to achieve common objectives (Leana and Van Buren, 1999). In addition to employee selection, compensation practices could play a significant function in building social capital within business entities (Kang and Snell, 2009; Leana and Van Buren, 1999). Higher degrees of trust between various organizational actors could be developed through economic rewards that encourage common goals – such as profit sharing and stock ownership (Huselid, 1995; Ichniowski et al., 1997; MacDuffie, 1995). Moreover, collective work could be enhanced by the means of performance-related remuneration practices that link workers' objectives with those of their employing firm (Leana and Van Buren, 1999). In parallel, job security is another HR practice that could assist in building social capital inside organizations. Job security could help in the creation of long-term relational contracts between employees and consequently, could promote elements of social capital inside firms (Dyer and Noboeka, 2000; Leana and Van Buren, 1999). In addition to job security, communication practices that transmit a firm's values and objectives could assist in the development of collective work and therefore, could also help promoting social capital inside organizations (Leana and Van Buren, 1999). Furthermore, performance appraisal practices that focus on constructive evaluations could encourage information exchange and can enhance trust amongst co-workers (Conway, 1999; Kang et al., 2007). Accordingly, scholars claim that performance appraisal could help building social capital inside organizations (Latham and Wexley, 1981; Leana and Van Buren, 1999).

Therefore, previous studies on social capital posit that HR practices such as selection, compensation, job security, communication and performance appraisal could help promoting this contextual variable inside business entities (Dyer and Noboeka, 2000; Kang et al., 2007; Latham and Wexley, 1981; Leana and Van Buren, 1999; Purcell et al., 2009; Youndt and Snell, 2004). As the influence of human resource practices inside firms is more likely shaped by how workers perceive HR practices (Chang, 1999, 2005; Gartner and Nollen, 1989; Gould-Williams, 2004; Macky and Boxall, 2007; Meyer and Smith, 2000; Ostroff and Bowen, 2000; Wright and Boswell, 2002; Wright and Nishi, 2004), it could be argued that the effect of these HR practices on social capital is more likely to occur through employees'

perception of these practices. Accordingly, even though there is little research evidence on the influence of knowledge workers' perception of HR practices on social capital, the examination of earlier studies on social capital and HR practices seems to indicate that knowledge workers' perception of selection, compensation, job security, communication and performance appraisal might have a role in building social capital.

5.2.4.2. The impact of knowledge workers' perception of HR practices on organizational capital

Researchers argue that HR practices that can incentivize workers to contribute towards their firm's procedures, databases and manuals can help developing a company's organizational capital (Hansen et al., 1999; Kang and Snell, 2009; Youndt and Snell, 2004; Youndt et al., 2004). In particular, performance appraisal that helps workers in assessing their involvement in the development of their firm's processes, manuals and databases and, compensation practices that reward employees for their role in enhancing organizational capital, can contribute to the development of this contextual variable. Since the impact of HR practices inside companies is more likely to occur through employees' perception of HR practices (Chang, 1999, 2005; Gartner and Nollen, 1989; Gould-Williams, 2004; Macky and Boxall, 2007; Meyer and Smith, 2000; Ostroff and Bowen, 2000; Wright and Boswell, 2002; Wright and Nishi, 2004), it could be argued that it is workers' perception of compensation and performance appraisal that is likely to affect organizational capital; rather than the mere existence of these practices. Therefore, even though there is not enough evidence on the linkages between knowledge workers' perception of HR practices and organizational capital, earlier studies on this construct and HRM seem to point that this employee group's perception of compensation and performance appraisal might have a function in building a firm's organizational capital.

5.2.4.3. The impact of knowledge workers' perception of HR practices on human capital

The literature indicates that certain HR practices could impact an organization's human capital. Selective hiring could have a key function in the acquisition of individuals that possess high levels of knowledge and expertise and, therefore could

play a central role in developing a firm's human capital (Youndt et al., 2004). Moreover, training programs could contribute to an organization's human capital, as these could help enhancing workers' knowledge and expertise (Snell and Dean, 1992). As well, career opportunities can influence a firm's human capital. Employees might perceive promotional prospects (based on performance) and internal career movements as factors that encourage them to invest in the advancement of their skills and knowledge (Horwitz et al., 2003; Koch and McGrath, 1996). However, even though selection, training and career opportunities could influence a firm's human capital, it could be argued that it is the mere presence of selective hiring practices rather than workers' perception of selection that is likely to affect the quality of the knowledge and expertise entering a certain organization (i.e. a firm's human capital). Furthermore, while training practices could have an important impact on the development of employees' knowledge, the literature on knowledge workers points that these workers generally view training as not playing a noteworthy role in the development of their skills and knowledge (Horwitz et al., 2003; May et al., 2002, Purcell et al., 2009; Thomson and Heron, 2002). Accordingly, even though there is not enough research on the influence of knowledge workers' perception of HR practices on human capital, earlier studies lead to argue that this employee group's perception of career opportunities might have a likely function in building a firm's human capital.

In sum, as mentioned in subsection 5.2.4, scholars have presented insights related to the possible influence that HR practices could have on the development of human, social and organizational capital (Bigley and Pearce, 1998; Conway, 1999; Dyer and Noboeka, 2000; Hansen et al., 1999; Kang et al., 2007; Kang and Snell 2009; Koch and McGrath, 1996; Latham and Wexley, 1981; Leana and Van Buren, 1999; McKnight et al., 1998; Purcell et al., 2009; Youndt and Snell, 2004; Youndt et al., 2004). Furthermore, as indicated in subsection 5.2.4, HRM researchers have posited that the impact of HR practices within organizations is more likely to occur through workers' perception of these practices (Chang, 1999, 2005; Gartner and Nollen, 1989; Gould-Williams, 2004; Macky and Boxall, 2007; Meyer and Smith, 2000; Ostroff and Bowen, 2000; Wright and Boswell, 2002; Wright and Nishi, 2004). By primarily relying on this existing knowledge in the HRM and forms of capital literature, subsection 5.2.4 has discussed the link that knowledge workers'

perception of HR practices could have with different forms of capital. Subsection 5.2.4 has argued that knowledge workers' perception of selection, compensation, job security, communication and performance appraisal might help building social capital. It has also anticipated that knowledge workers' perception of compensation and performance appraisal might assist in developing organizational capital. As well, subsection 5.2.4 has expected that knowledge workers' perception of career opportunities might help enhancing human capital. Nonetheless, it is essential to indicate that even though scholars have offered valuable insights pertinent to the influence of HR practices on forms of capital, there are a small number of studies which have supported their theoretical arguments with empirical investigations. Most importantly, while researchers have presented some knowledge that is related to the effect of HR practices on forms of capital, there is little research which has particularly attempted to explain and empirically examine how employees' (including the knowledge worker group) views and perceptions of HR practices can impact human, social and organizational capital.

5.2.5. The impact of human, social and organizational capital on knowledge workers' organizational commitment and job satisfaction

Chapter 3 of this thesis has discussed the impact of forms of capital (human, social and organizational) on employees' organizational commitment and job satisfaction. The following three subsections will mainly recapitulate on the literature presented in chapter 3, in an attempt to explain the influence that human, social and organizational capital might have on knowledge workers' organizational commitment and job satisfaction. The expected connections between these contextual factors and knowledge workers' attitudes are outlined in the next table.

Expected likely impact	Main supporting literature
Social capital on knowledge workers' organizational commitment and job satisfaction	Alvesson, 1993; Arthur, 1994; Burt, 1992; Cappelli, 1999; Chang 1999, 2005; Dyer and Nobeoka, 2000; Hargadon and Fanelli, 2002; Horwitz et al., 2003; Kang et al., 2007; Krackhardt and Hanson, 1993; Leana and Van Buren, 1999; Nahapiet and Ghoshal, 1998; Purcell et al., 2009.
Organizational capital on knowledge workers' organizational commitment and job satisfaction	Alvesson, 1993; Arthur, 1994; Cappelli, 1999; Chang 1999, 2005; Gould-Williams, 2004; Horwitz et al., 2003; Katila and Ahuja, 2002; Purcell et al., 2009; Subramaniam and Youndt, 2005; Youndt and Snell, 2004.
Human capital on knowledge workers' organizational commitment and job satisfaction – through social capital	Brown and Duguid, 2001; Cicourel, 1973; Kang et al., 2007; Nahapiet and Ghoshal, 1998; Youndt and Snell, 2004; Youndt et al., 2004.
Human capital on knowledge workers' organizational commitment and job satisfaction – through organizational capital	Hansen et al., 1999; Youndt and Snell, 2004

Table 5.3: The impact of human, social and organizational capital on knowledge workers' organizational commitment and job satisfaction.

5.2.5.1. The impact of social capital on knowledge workers' organizational commitment and job satisfaction

Earlier studies have highlighted that a big share of knowledge creation, development and exchange between organizational members can happen through social capital (Adler and Kwon, 2002; Dyer and Nobeoka, 2000; Nahapiet and Ghoshal, 1998). For example, recurring cooperation between employees that are enclosed in small circles can help them in deepening their skills and knowledge (Kang et al., 2007; Leana and Van Buren, 1999). Furthermore, studies have pointed that trust between workers, who might not have previous interactions with each other, could assist in the transfer and development of in-depth knowledge (Dyer and Nobeoka, 2000; Kang et al., 2007; Leana and Van Buren, 1999). As well, the existence of irregular interactions and coordination between members that are spread across large business units could help in exchanging and developing novel ideas and new knowledge between these employees (Burt, 1992; Hargadon and Fanelli, 2002; Kang, et al., 2007). Due to the function of social capital in knowledge development, researchers posit that this contextual variable could have a central role in the management of an organization's workforce (Leana and Van Buren, 1999; Nahapiet and Ghoshal, 1998; Purcell et al., 2009). As social capital is a factor that is generally maintained within

the company (irrespective of changes in certain organizational members), the positive outcomes that employees could gain from social capital within their firm might affect their work attitudes (Krackhardt and Hanson, 1993; Leana and Van Buren, 1999; Purcell et al., 2009). When workers perceive that their organization is providing them with support for the development of their skills and knowledge and, is fulfilling their aspirations for knowledge advancement, this could translate in increasing their levels of organizational commitment and job satisfaction (Arthur, 1994; Chang 1999, 2005; Gould-Williams, 2004; Purcell et al., 2009). In relation to knowledge workers, previous studies emphasize that this employee group is particularly keen on enhancing its skills and knowledge (Alvesson, 1993; Cappelli, 1999; Horwitz et al., 2003). Accordingly, based on earlier arguments on social capital, employee attitudes and knowledge workers, it could be expected that the presence of elements of social capital inside a firm might help increase this employee group's organizational commitment and job satisfaction.

5.2.5.2. The impact of organizational capital on knowledge workers' organizational commitment and job satisfaction

Organizational capital is commonly perceived as being a highly reliable foundation of knowledge within companies (Subramaniam and Youndt, 2005). This contextual factor can assist firms and their workers in preserving and processing knowledge in a quick and standardized manner (Katila and Ahuja, 2002; Subramaniam and Youndt, 2005). Moreover, this form of capital can increase knowledge utilization and can offer a strong platform that can advance employees' skills and knowledge (Lyles and Mitroff, 1980; Martin and Mitchell, 1998; Youndt and Snell, 2004). Particularly, organizational capital can enable workers to repeatedly use their company's preserved knowledge and consequently, could help them in deepening their skills and knowledge (Katila and Ahuja, 2002; Subramaniam and Youndt, 2005; Youndt et al., 2004). Therefore, as organizational capital is a construct that is owned by the firm (Youndt and Snell, 2004), it could be argued that this contextual factor could influence workers' attitudes. When employees view that their company is offering them support for the advancement of their skills and knowledge and, is realizing their aspirations for knowledge development, this could result in enhancing their levels of organizational commitment and job satisfaction (Arthur, 1994; Chang 1999, 2005; Gould-Williams, 2004; Purcell et al., 2009). As mentioned in the previous

subsection, scholars highlight the particular importance of knowledge and skills development for knowledge workers (Alvesson, 1993; Cappelli, 1999; Horwitz et al., 2003). Therefore, based on previous arguments on organizational capital, employee attitudes and knowledge workers, it could be expected that this form of capital might assist in enhancing this worker cluster's organizational commitment and job satisfaction.

5.2.5.3. The impact of human capital on knowledge workers' organizational commitment and job satisfaction

Human capital might have an indirect influence on employees' attitudes through its likely role in developing a firm's social and organizational capital (Kang et al., 2007; Youndt et al., 2004). Researchers posit that when workers have acquired common experiences, this could assist in promoting common languages amongst organizational members (Brown and Duguid, 2001; Cicourel, 1973; Kang et al., 2007). In turn, this could help building social capital (Nahapiet and Ghoshal, 1998). Moreover, workers' interpersonal skills could have a key function in enhancing collective work inside businesses and accordingly, can help promoting social capital (Leana and Van Buren, 1999; Youndt and Snell, 2004). In relation to organizational capital, scholars claim that workers' knowledge and experiences are likely to play a key role in the development of their firm's databases, procedure and manuals (Hansen et al., 1999; Youndt and Snell, 2004).

In sum, as indicated in subsection 5.2.5, previous studies have argued that a firm's social and organizational capital could play a key role in the development of employees' skills and knowledge (Burt, 1992; Dyer and Nobeoka, 2000; Hargadon and Fanelli, 2002; Kang et al., 2007; Katila and Ahuja, 2002; Krackhardt and Hanson, 1993; Leana and Van Buren, 1999; Lyles and Mitroff, 1980; Martin and Mitchell, 1998; Nahapiet and Ghoshal, 1998; Purcell et al., 2009; Subramaniam and Youndt, 2005; Youndt and Snell, 2004; Youndt et al., 2004). Moreover, earlier research has posited that a company's human capital could enhance its social and organizational capital (Brown and Duguid, 2001; Cicourel, 1973; Hansen et al., 1999; Kang et al., 2007; Leana and Van Buren, 1999; Nahapiet and Ghoshal, 1998; Youndt and Snell, 2004). Furthermore, as mentioned in subsection 5.2.5, previous studies dealing with workers' attitudes have claimed that when employees perceive

support for their knowledge development in their firm, this could increase their organizational commitment and job satisfaction (Arthur, 1994; Chang 1999, 2005; Gould-Williams, 2004; Purcell et al., 2009). Additionally, as highlighted in subsection 5.2.5, knowledge worker research has emphasized on the significance of knowledge and skills growth for this worker cluster (Alvesson, 1993; Cappelli, 1999; Horwitz et al., 2003). Based on this literature on forms of capital, employee attitudes and knowledge workers, subsection 5.2.5 has discussed the possible impact that human, social and organizational capital could have on knowledge workers' organizational commitment and job satisfaction. In sum, it has anticipated that aspects of social capital and organizational capital could help in increasing knowledge workers' organizational commitment and job satisfaction. In addition, subsection 5.2.5 has argued that elements of human capital could have an indirect impact on knowledge workers' attitudes through their likely function in developing social and organizational capital. However, it is important to mention that while earlier studies provide some insights that could help in understanding the connections between forms of capital and knowledge workers' attitudes, there is still not enough knowledge on these linkages in the academic literature. Studies which have offered arguments that are directly pertinent to the influence of social capital on workers' attitudes are still emerging (Krackhardt and Hanson, 1993; Leana and Van Buren, 1999; Purcell et al., 2009). Moreover, there is little research which has attempted to explain the effect of organizational capital on employees' attitudes. As well, there is a need for more work that examines the relationships between human capital, and, social and organizational capital. In addition to all that, there is a need for substantially more research and empirical investigations, which particularly explain how the knowledge worker group would react to different forms of capital.

In conclusion, the two previous subsections have presented the expected connections that could exist between knowledge workers' perception of HR practices and, human, social and organizational capital, and have argued the anticipated linkages between these contextual factors and knowledge workers' attitudes. Therefore, at this stage, the next subsection presents a comprehensive discussion of the possible influence that these contextual factors could have on the interconnections between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction.

5.2.6. The influence of human, social and organizational capital on the interactions between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction

Based on previous research, subsection 5.2.4 has presented the expected linkages between knowledge workers' perception of HR practices and, human, social and organizational capital. In particular, it seems that knowledge workers' perception of selection, compensation, job security, communication and performance appraisal might help building social capital. Moreover, knowledge workers' perception of compensation and performance appraisal might assist in developing organizational capital. As well, knowledge workers' perception of career opportunities can enhance human capital. In parallel, based on earlier studies, subsection 5.2.5 has argued that both, social and organizational capital might help increasing knowledge workers' organizational commitment and job satisfaction. Furthermore, human capital can have an indirect impact on knowledge workers' commitment and job satisfaction, through the likely role of human capital in building social and organizational capital. In sum, as illustrated in the subsequent diagram, the examination of earlier research seems to indicate that knowledge workers' perception of certain HR practices might have an indirect influence on their organizational commitment and job satisfaction, through human, social and organizational capital.

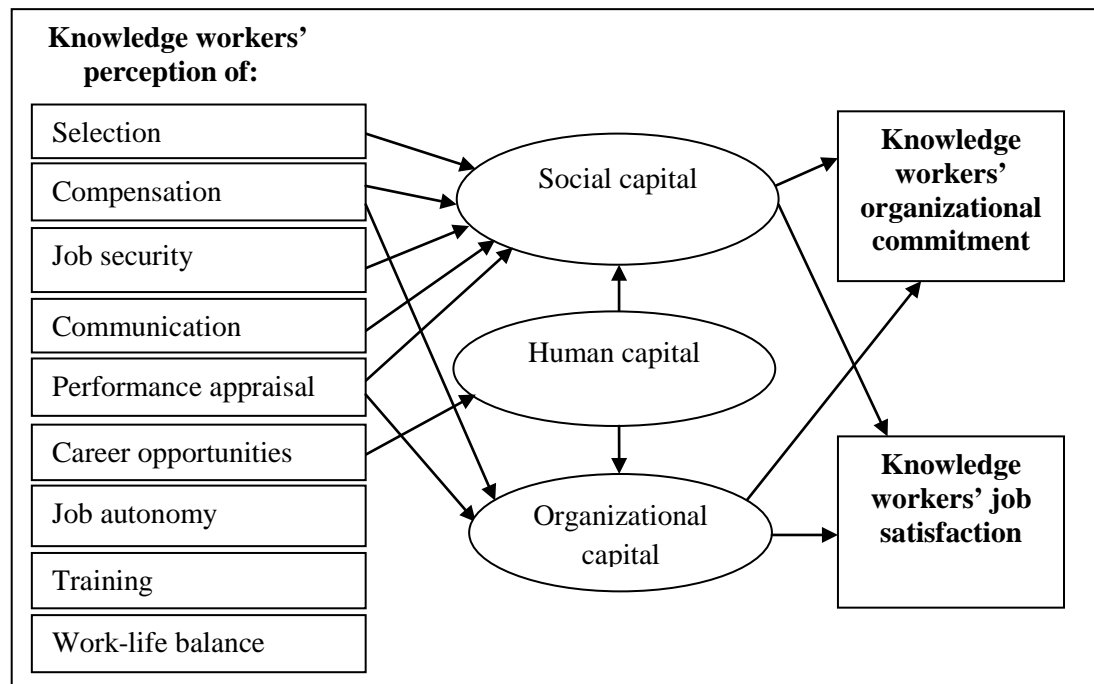


Figure 5.2: The impact of knowledge workers' perception of HR practices on their, organizational commitment and job satisfaction – through forms of capital.

A comparison between figures 5.1 and 5.2 indicates that accounting for human, social and organizational capital might offer more insights onto the linkages between knowledge workers' perception of HR practices and their work attitudes. The examination of these contextual factors could assist in indentifying human resource practices whose perception can have an indirect influence on knowledge workers' commitment and job satisfaction, through different forms of capital. Therefore, this could expose additional mechanisms through which knowledge workers' perception of HR practices can be linked to their work attitudes. Furthermore, these indirect linkages between knowledge workers' perception of HR practices and their attitudes (through forms of capital) could vary between companies, if the features of forms of capital differ among these organizations. This is because earlier studies highlight that the impact of contextual factors on workers' responses could vary depending on the characteristics of these contextual elements inside different companies (Clinebell and Shadwick, 2005; Podsakoff et al., 1993; Rousseau, 1978). Accordingly, a consideration of human, social and organizational capital might offer a more thorough understanding of the HR-attitudes connection for knowledge workers operating in firms that have different attributes of these forms of capital.

5.3. Analytical framework

The introductory section of this chapter has explained the theoretical background behind this thesis primary research question (how does human, social and organizational capital influence the interactions between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction?). Section 5.2 has then emphasized that in order to address this thesis main research question there is a need to answer a series of secondary questions.

First: how can we explain the interactions between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction?

Second: how can we explain the connections between knowledge workers' perception of HR practices and, human, social and organizational capital?

Third: how can we explain the impact of human, social and organizational capital on knowledge workers' organizational commitment and job satisfaction?

The previous section has attempted to address this thesis research questions by primarily relying on knowledge present in earlier studies. However, it appears that more research is required in order to better answer this thesis research questions. Accordingly, in addressing its objective, this thesis does not solely depend on insights from previous literature. It also performs an empirical examination of certain areas. The following subsections will point towards these areas (by recapitulating on the main insights and gaps in the earlier research highlighted in section 5.2) and will present the key analytical steps that are conducted in this thesis.

5.3.1. The characteristics of human, social and organizational capital

Subsection 5.2.1 has explained that in order to help addressing this thesis objective, there is a need to understand the characteristics of human, social and organizational capital. As indicated in subsection 5.2.1, previous academic papers have elaborated on these forms of capital and have offered valuable information that help understanding these contextual variables (Adler and Kwon, 2002; Burt, 1997; Coleman, 1990; Hansen et al., 1999; Kostova and Roth, 2003; Leana and Van Buren, 1999; Lepak and Snell, 1999; Nahapiet and Ghoshal, 1998; Putnam, 1993; Subramaniam and Youndt, 2005; Swart, 2006; Swart et al., 2003; Valcour and Snell, 2002; Youndt and Snell, 2004; Youndt et al., 2004). However, while previous research offers key insights on these forms of capital, it might be helpful for this thesis to account (in its empirical investigation) for the specific attributes of human, social and organizational capital within its investigated research settings. This is because the features of forms of capital might vary between companies and earlier studies have claimed that the impact of contextual factors on workers' responses could differ depending on the characteristics of these contextual elements within various firms (Clinebell and Shadwick, 2005; Podsakoff et al., 1993; Rousseau, 1978). Therefore, in addition to relying on earlier research describing human, social and organizational capital, this thesis investigates the existing attributes of these forms of capital inside its examined settings.

5.3.2. The key characteristics of knowledge workers and knowledge intensive organizations

As explained in subsection 5.2.2, in order to assist in addressing this thesis main purpose it is important to comprehend the characteristics of knowledge workers and knowledge intensive firms. Subsection 5.2.2 has presented valuable insights (from previous research) which help in understanding the general features of knowledge workers and knowledge intensive organizations (Alvesson, 1993, 1995, 2000, 2004; Alvesson and Willmott, 2002; Baron and Hannan, 2002; Cappelli, 1999; Deetz, 1995; Frenkel et al., 1999; Horwitz et al., 2003; Maister, 1982; May et al., 2002; Purcell et al., 2009; Reed, 1996; Thomson and Heron, 2002). Yet, the attributes of knowledge workers might have some differences amid sectors and/or organizational positions. Similarly, some of the characteristics of KIFs might as well, differ amongst firms and/or types of industries. Therefore, in this thesis empirical examination, it might not be sufficient to solely rely on the general features of knowledge workers and KIFs that were listed in earlier studies. It might be helpful to also account for the specific attributes that this thesis studied knowledge worker groups and investigated settings might have. In order to achieve that, this thesis investigates the main characteristics of its examined settings and knowledge worker clusters.

5.3.3. How can we explain the interactions between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction?

Subsection 5.2.3 has explained that answering this thesis main research question could require an understanding of the interactions between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction. As indicated in subsection 5.2.3, HR-attitudes scholars have offered valuable knowledge onto the perception of HR practices-attitudes connection (Boxall and Purcell, 2003; Chang, 2005; Gould-Williams, 2004; Kinnie et al., 2005; Macky and Boxall, 2007; Meyer and Smith, 2000; Purcell et al., 2003, 2009; Wayne et al., 1997; Wright et al., 2003). Moreover, the knowledge worker literature encompasses arguments that could help in understanding the links between HR practices and, knowledge workers' organizational commitment and job satisfaction (Alvesson,

1993, 1995; Arthur and Rousseau, 1996; Baron and Hannan, 2002; Cappelli, 1999; Deetz, 1995; Horwitz et al., 2003; Kinnear and Sutherland, 2000; May et al., 2002; Morris, 2000; Purcell et al., 2009; Reed, 1996; Thompson and Heron, 2002). By primarily relying on this body of knowledge in the HR-attitudes and knowledge workers literature, subsection 5.2.3 has attempted to explain the possible connections that could exist between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction. These anticipated linkages that were argued and discussed based on earlier research, are outlined in figure 5.3a. However, even though previous studies have provided knowledge that could be used in understanding these interconnections, research in this area is still emerging. While the knowledge worker literature contains theoretical arguments pertinent to the impact of HR practices on knowledge workers' attitudes, there is a small number of scholars which have empirically investigated these linkages (Horwitz, et al., 2003; Kinnear and Sutherland, 2000; Purcell et al., 2009; May et al. 2002). As well, it is important to note that whereas HR-attitudes researchers provide valuable insights on the connections between employees' 'perception' of HR practices and, their commitment and job satisfaction, there is little research which has particularly addressed how the knowledge worker group's views of HR practices can impact its attitudes (Purcell et al., 2009). Therefore, in its attempt to have a thorough explanation of the influence of knowledge workers' perception of HR practices on their attitudes, this thesis does not solely rely on the present knowledge in the HR-attitudes and knowledge worker literature. It also conducts an empirical investigation of the linkages between this employee group's perception of HR practices and, its organizational commitment and job satisfaction.

Figure 5.3a: How can we explain the interactions between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction?

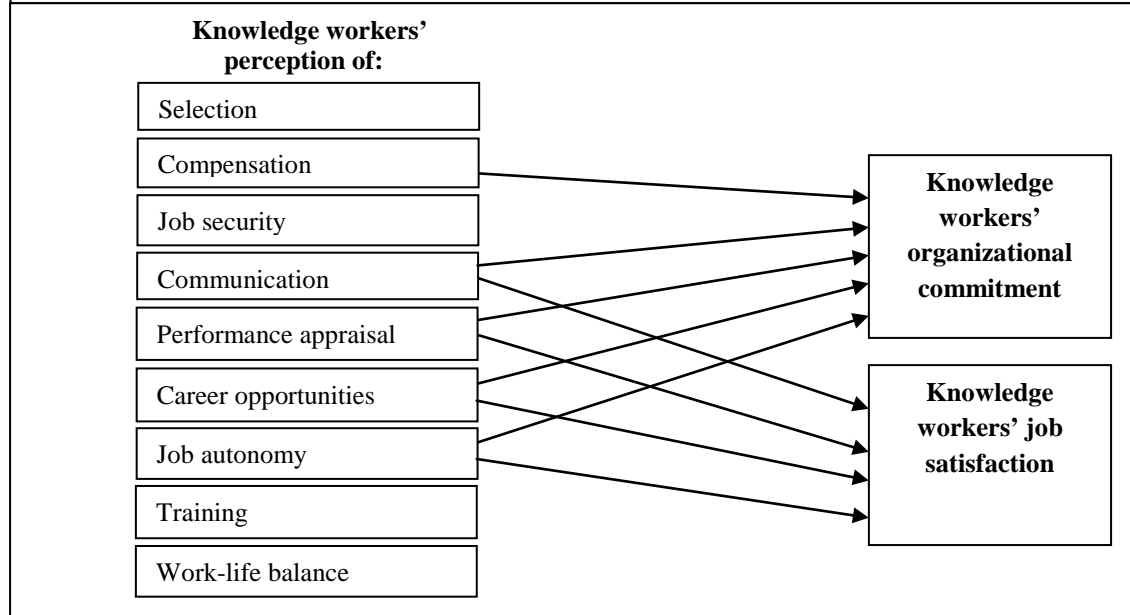


Figure 5.3b: How can we explain the connections between knowledge workers' perception of HR practices and, human, social and organizational capital?

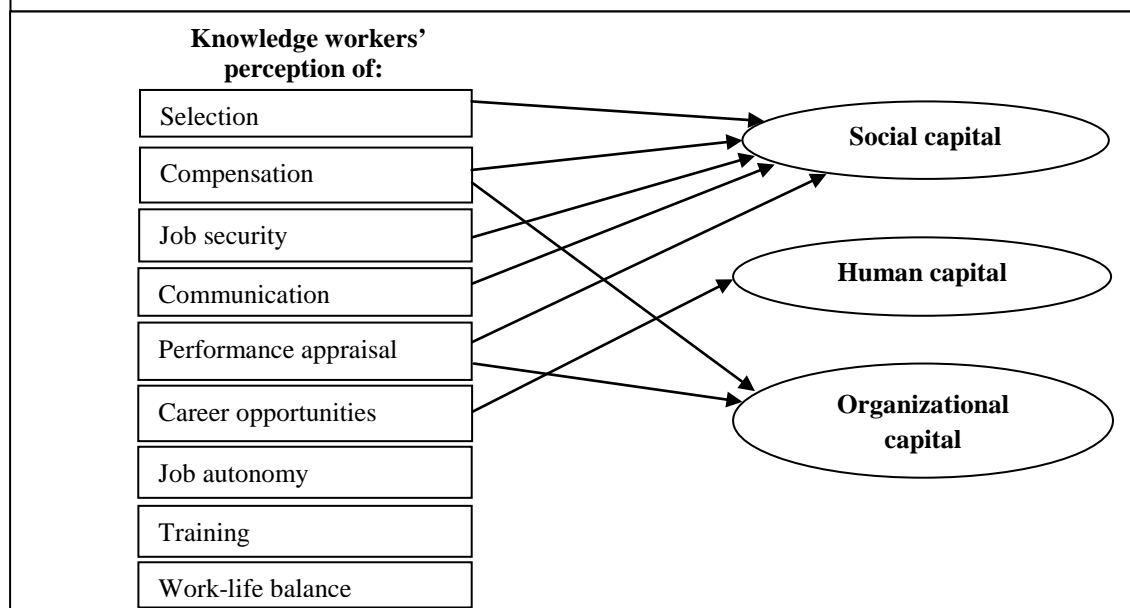


Figure 5.3c: How can we explain the impact of human, social and organizational capital on knowledge workers' organizational commitment and job satisfaction?

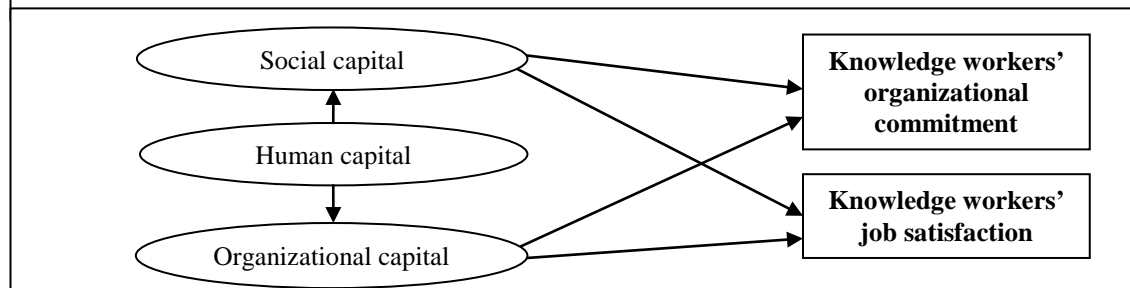


Figure 5.3: Secondary research questions: expected links based on earlier research.

5.3.4. How can we explain the connections between knowledge workers' perception of HR practices and, human, social and organizational capital?

As stated in the last paragraph of subsection 5.2.3, in answering this thesis main research question there is a need to understand the connections between knowledge workers' perception of HR practices and, human, social and organizational capital. Subsection 5.2.4 has highlighted studies which offer key knowledge that is related to the impact that human resource practices could have on forms of capital (Bigley and Pearce, 1998; Conway, 1999; Dyer and Noboeka, 2000; Hansen et al., 1999; Kang et al., 2007; Kang and Snell, 2009; Koch and McGrath, 1996; Latham and Wexley, 1981; Leana and Van Buren, 1999; McKnight et al., 1998; Purcell et al., 2009; Youndt and Snell, 2004; Youndt et al., 2004). As well, as mentioned in subsection 5.2.4, HRM scholars have argued that the influence of HR practices within firms is more likely to occur through employees' perception of these practices (Chang, 1999, 2005; Gartner and Nollen, 1989; Gould-Williams, 2004; Macky and Boxall, 2007; Meyer and Smith, 2000; Ostroff and Bowen, 2000; Wright and Boswell, 2002; Wright and Nishi, 2004). Based on this body of knowledge on HRM and forms of capital, subsection 5.2.4 has attempted to explain the possible linkages that could exist between knowledge workers' perception of HR practices and, human, social and organizational capital. These connections that were argued and explained based on previous research, are highlighted in figure 5.3b. However, it is worth noting that while researchers have provided key arguments related to the impact of HR practices on forms of capital, there is not enough empirical support for these linkages in the academic literature. Moreover, it is important to point that most studies, which have discussed the effect of human resource practices on forms of capital, have not particularly explained how workers' (including the knowledge worker cluster) views and perceptions of these practices can affect these contextual elements. Therefore, in addressing this research question, this thesis does not solely depend on key insights provided in the forms of capital and HRM literature. It also performs an empirical investigation of the connections between knowledge workers' perception of HR practices and, human, social and organizational capital.

5.3.5. How can we explain the impact of human, social and organizational capital on knowledge workers' organizational commitment and job satisfaction?

The end paragraph of subsection 5.2.3 has indicated that in answering this thesis main research question there is a need to understand the influence of human, social and organizational capital on knowledge workers' organizational commitment and job satisfaction. As mentioned in subsection 5.2.5, earlier research has posited that a firm's social and organizational capital could have a central function in the enhancement of workers' skills and knowledge (Burt, 1992; Dyer and Nobeoka, 2000; Hargadon and Fanelli, 2002; Kang et al., 2007; Katila and Ahuja, 2002; Krackhardt and Hanson, 1993; Leana and Van Buren, 1999; Lyles and Mitroff, 1980; Martin and Mitchell, 1998; Nahapiet and Ghoshal, 1998; Purcell et al., 2009; Subramaniam and Youndt, 2005; Youndt and Snell, 2004; Youndt et al., 2004). As indicated in subsection 5.2.5, scholars have also argued that an organization's human capital can influence its social and organizational capital (Brown and Duguid, 2001; Cicourel, 1973; Hansen et al., 1999; Kang et al., 2007; Leana and Van Buren, 1999; Nahapiet and Ghoshal, 1998; Youndt and Snell, 2004). Furthermore, as stated in subsection 5.2.5, research on employee attitudes claims that when workers perceive support for their knowledge development in their organization, this might enhance their work attitudes (Arthur, 1994; Chang 1999, 2005; Gould-Williams, 2004; Purcell et al., 2009). As well, subsection 5.2.5 has pointed that the knowledge worker literature is highlighting the importance of skills and knowledge development for this employee group (Alvesson, 1993; Cappelli, 1999; Horwitz et al., 2003). By primarily relying on this literature on forms of capital, workers' attitudes and knowledge workers, subsection 5.2.5 has attempted to explain the connections that might be present between forms of capital and, knowledge workers' organizational commitment and job satisfaction. These linkages that were anticipated and explained based on earlier studies, are outlined in figure 5.3c. Nonetheless, whereas previous research offers some knowledge that could assist in explaining the linkages between forms of capital and knowledge workers' attitudes (as summarized in this subsection), there is a need for substantially more insights onto these connections. Theoretical arguments that are directly related to the impact of social capital on employees' attitudes are still emerging (Krackhardt and Hanson, 1993; Leana and Van Buren, 1999; Purcell et al., 2009). Moreover, there is a lack of studies which

have particularly addressed the influence of organizational capital on workers' attitudes. Furthermore, there is a need for more research that investigates the linkages between human capital, and, social and organizational capital. Last but not least, it is important to indicate that there are little arguments and empirical examinations tackling the reactions that the knowledge worker cluster could have from various forms of capital. Consequently, in explaining the impact of forms of capital on knowledge workers' attitudes, this thesis does not solely rely on the existing literature on forms of capital, employee attitudes and knowledge workers. It also performs an empirical examination of the linkages between human, social and organizational capital and, knowledge workers' organizational commitment and job satisfaction.

5.3.6. Thesis main analytical steps

Earlier studies provide valuable knowledge that could help in addressing this thesis key objective. Nonetheless, it seems that more examinations are needed in order to more thoroughly answer this thesis research questions. Accordingly, to address its main and secondary research questions, this thesis goes through a number of analytical steps that are based on previous research as well as empirical data gathered in this thesis. In particular, this thesis attempts to analyze the main characteristics of its studied knowledge workers, knowledge intensive settings and, human, social and organizational capital within these settings. Moreover, after accounting for the formal HR policies and the implementation of these policies into practices inside the examined settings, this thesis analyzes knowledge workers' perception of the HR practices that are present inside their firms. Subsequently, this thesis studies the interconnections between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction (without accounting for the function of forms of capital). It then analyzes the possible role of human, social and organizational capital in the influence of knowledge workers' perception of HR practices on their organizational commitment and job satisfaction. This function of context is firstly, examined by analyzing the linkages between knowledge workers' perception of HR practices and each of human, social and organizational capital. Secondly, the role of social and organizational capital in

between knowledge workers' perception of HR practices and attitudes is also analyzed by attempting to study how social and organizational capital can be linked to knowledge workers' organizational commitment and job satisfaction. Moreover, the function of human capital in the links between knowledge workers' perception of HR practices and their attitudes is also assessed by analyzing the interconnections between human capital and each of social and organizational capital.

5.4. Conclusion

This chapter has highlighted this thesis's research framework and has then outlined its key analytical steps. At this stage and prior to elaborating on the analytical episodes, the next chapter will discuss the research methodology that is employed in this thesis. As it will be explained in the subsequent chapter, the choice of the research method was predominantly reliant on the nature of the research questions asked in this thesis.

CHAPTER 6

Research Methodology

6.1. Introduction

In their efforts to develop a research design, scholars have to decide on a number of interconnected factors, such as the type of the epistemological perspective they support, the strategy through which they want to investigate the research question, the nature of the data to be collected and the data analysis techniques (Bryman, 2004; Creswell, 2003). The aim of this chapter is to highlight the methodological approaches that are employed in the current thesis. Accordingly, the subsequent paragraphs present insights on the researcher's philosophical perspective, the characteristics of the adopted research strategy, the criteria behind the choice of the research strategy, the selection of the investigated settings, the nature of the collected data, as well as the data gathering techniques and the means of data analysis.

6.2. Research Philosophy

In their attempts to investigate the impact of human resource management on employee attitudes, many scholars have gathered data through surveys that often span several organizations within or across different markets. In such studies, researchers generally measured attitudinal outcomes against the number of existing HRM policies inside the examined companies. The philosophical concept most often related to the latter research approach is positivism. 'In positivism a statement can be true only if it is self-evident analytical, deductive truth as is found in mathematics and formal logic or if the statement describes reality precisely' (Cacioppo et al., 2004, p. 215). While a positivists approach in human resource management generally exhibits valuable statistical associations amongst HRM practices (or policies) and attitudinal outcomes, this perspective commonly fails to explain how these associations might exist (Potter, 2000; Tyson, 1997; Wright et al., 2003). Nonetheless, this thesis seeks to contribute to the HR-attitudes link by attempting to understand how contextual variables can influence the interconnections between perception of HR practices and employee attitudes. In other words, this thesis adopts a perspective that attempts to explain how a particular phenomenon occurs. Such a perspective can be associated with the 'realist' ontological approach. For realists, the

positivist approach of building associations through large scale and cross-sectional surveys is often not capable of depicting the processes through which phenomena within particular entities could occur (Thagard, 2002). Realists claim that studying these processes requires a more explanatory approach, which assumes that entities are real and could have particular characteristics that need to be thoroughly investigated (Dubin, 1982; Thagard, 2002).

6.3. Choosing the research strategy: case study

Research studies in business management and various social sciences areas can revolve around different sorts of research strategies, such as: histories, surveys, case studies, and experiments (Whitley, 1996; Yin, 1994). Choosing amongst the latter research strategies is mainly based on the three subsequent factors. Perhaps the most important criterion that researchers should pay attention to while selecting a research strategy is the research question (Yin, 1994; 2003). This thesis key aim is to answer how does context (human, social and organizational capital) influence the interactions between knowledge workers' perception of HR practices and, their commitment and job satisfaction. The most appropriate research methods in answering 'how' and 'why' questions are experiments, case studies and histories (Whitley, 1996). In effect, in answering 'why' and 'how' types of questions, the researcher needs to have an in-depth understanding of particular phenomena and the contexts in which these phenomena occur, which as indicated, could not be easily captured through cross-sectional or large quantitative surveys (Yin, 1994, 2003).

Aside from the research question, the two other criteria that need to be taken into account while choosing a research strategy are the level of control the researcher has over particular factors (such as: social interconnections and work practices), as well as the desired degree of concentration on recent or historical facts. Experimental strategies provide the researcher with a high degree of power and control over people and the research setting, which could be helpful in understanding mechanisms and processes. Nonetheless, the use of experimental methodologies is obviously inappropriate in this study, since the researcher has no control over company practices and their effect on attitudinal and behavioral outcomes. Moreover, histories are usually adopted when there is a lack of access to events and mostly, when the researcher is interested in investigating specific instances that occurred in earlier

periods in time. The latter two situations do not apply to this study, since the researcher has a certain level of access to employees/settings, and is mainly interested in examining recent and occurring phenomena within currently existing business contexts. This being said, based on the three aforementioned criteria, the case study research strategy seems to be the most appropriate approach in answering this thesis research question. In effect, case studies are highly advocated in research work that attempts to deal with 'how' and 'why' questions within accessible, real-life and contemporary settings (Yin, 2003). Additionally, case studies are more recommended when studying complex organizations and individual or group relations (Kanter, 1977; Whitley, 1996; Yin, 1993, 1994, 2003). Case studies allow the researcher to interact with participating individuals, which enables the examiner to have a subjective sense of the phenomenon or relationship being investigated (Whitley, 1996). In relation to the human resource literature, scholars mention that case studies should be the method of choice for researchers attempting to progress the field, particularly towards understanding the hidden processes that could exist between HRM and, organizational or individual outcomes (Purcell et al., 2003).

Yin (1989, p. 23) delineates case study research as 'an empirical inquiry that investigates a contemporary phenomenon within its real life context, when the boundaries between the phenomenon and the context are not clear'. Case studies are often viewed as prominent explanatory techniques, since they are capable of accounting for the context in which a certain phenomenon is occurring (Easton, 2000; Eisenhardt, 1989; Yin, 2003). Particularly, case studies are generally used when it is difficult to unravel the phenomena that are examined from the context in which they exist (Yin, 2003). For instance, social phenomena are generally highly connected with the setting in which they occur and consequently, cannot be thoroughly understood by just investigating the factors that are directly related to their development (Hesketh and Fleetwood, 2006). Instead, researchers ought to account for particular mechanisms and various interactions that are embedded within the specific contexts in which these social phenomena exist (ibid). This could usually be captured through an in-depth investigation of the research setting – an approach that is best achieved through case studies (Hesketh and Fleetwood, 2006; Sarantakos, 1998; Yin, 2003). In effect, one of the key strengths of case studies when examining 'why' and 'how' questions, is based on the fact that such strategy can have a broader

understanding of relationships between variables by investigating the interactions between complex contextually based factors that occur around the latter connections; such as social relationships within a particular team, division and organization, or across these latter groupings (Archer, 2003). In this thesis, the mechanisms that are being examined, such as the connection between perception of HR practices and knowledge workers' organizational commitment, and social relationships at work, occur in open organisms and structures within business settings. Therefore, the latter factors cannot be studied in isolation as they exist in and around contextual clusters that can have substantial influence on them (Hesketh and Fleetwood, 2006).

Scholars note that case study is not a technique for data collection and, is more a research strategy that could encompass different quantitative and/or qualitative data collection methods (Miles and Huberman, 1994; Yin, 1994). The disadvantage of case study methodology is that most often the researcher cannot generalize from results (Whitley, 1996; Yin, 1994). Nonetheless, Yin (1993, 1994) emphasizes that the main objective of case studies is to exhibit findings of theoretical and practical value and not to produce representative results across a population; which is a key aim in this current thesis. In effect, this thesis's primary objective is to explain 'why' and 'how' certain linkages exist, by conducting an in-depth examination of patterns and themes within certain settings – rather than attempting to produce statistical relationships that aim at creating generalizations across contexts. Scholars have in fact, indicated that alongside studies that produce universal results, case studies in specific segments or geographical locations are needed to further advance the body of knowledge in human resource management (Purcell, 1999).

6.4. Research design

Case study research could be designed based on a single case or multiple cases, and is founded around one or more units of analysis (Yin, 2003). There is no general rule related to whether a researcher should undergo one or several case studies. Some scholars in organizational theory and management posit that adopting a single case study approach allows the researcher to have a more in-depth examination of particular mechanisms (Dutton and Dukerich, 1991; Martin et al., 1998; Ogbonna and Wilkinson, 2003). On the other hand, other authors, such as Bryman (2004, p.53), claim that researchers 'can understand social phenomena better when these are

compared across two or more meaningfully contrasting cases'. In that regard, multiple cases can enhance theory building and can uncover new conceptualizations (Eisenhardt, 1989). The evidence generated from conducting more than one case study is seen as capable of achieving more solid research conclusions (Hakim, 1987). When pursuing multiple case studies the researcher could benefit from either replicating similar findings across cases or generating findings that differ amid different settings and that could be explained through various theoretical reasoning (Bryman, 2004; Yin, 1994, 2003). Conversely, Yin (1994, p. 50) posits that when performing multiple case studies, 'greater uncertainty lies with the larger number of cases' and the 'typical criteria regarding sample size should not be used'. In other words, it is not always suitable that researchers adopt a large quantity of cases in order to represent a particular population or group, and a breadth in the number of cases could reduce the depth and certainty of findings; which is often a central aim for case study strategies. This sounds contradicting to the aforementioned claim by Hakim (1987), who indicates that more cases would increase the robustness and validity of results. Indeed, as indicated, it appears that there is no universal agreement or recognized rules amongst scholars with regard to the number of cases that should be conducted. Some researchers argue that around 8 cases is a good number to produce enough evidence to generate a concept or theory (Eisenhardt, 1989). However, other scholars seem to disagree with the latter number, as they mention that the more cases a researcher investigates the less contextual information she could gather which could consequently, reduce the level of depth that is generally desired out of conducting case studies (Dyer and Wilkins, 1991). Therefore, it seems that examining a single case study might limit the possibilities of producing conclusions of theoretical value, and conducting a large number of cases might be at the cost of in-depth information. Hence, it appears that more than 1 but a relatively small number of cases might be most suitable for a thorough and in-depth understanding of mechanisms between HR and attitudes as well as other social phenomena occurring in particular contexts. For the latter reasons, and since time and resources are limited for the purpose of this thesis, the researcher decided to attempt to conduct 3 case studies. Eventually, 2 cases studies were conducted and, the details on the selection of these cases are presented in the next section.

6.4.1. Cases selection

The objective of this thesis suggests that the cases to be studied should be part of a knowledge intensive setting. For this reason, the researcher decided to target firms that are likely to be knowledge intensive organizations such as: research and development groups, high-tech firms, law firms, advertising agencies, management consultancy firms and engineering consultancy organizations (Alvesson, 1995, 2000) – as it will be explained subsequently in this chapter, the features of the chosen cases will be compared with the definition of a KIF in the academic literature. The researcher also chose to go for large KIFs (employing more than 1000 workers), dependent on the belief that larger companies might offer more valuable insights on HRM as they are expected to have more complex systems of human resource management (Purcell et al., 2003). In effect, the researcher gave priority for firms that are renowned for the value they give to their human resources and the quality of their people management activities. Another reason for looking for large knowledge intensive firms was to attempt and increase the probability of having more informants (particularly in positions of key responsibility) participating in the study.

The initial geographical boundary of the targeted firms was the province of Quebec in Canada – this was predominantly to minimize research cost since the researcher is residing in Montreal. Another reason for choosing Canada was the relatively low number of studies targeting HRM and attitudes in the researcher home country. Nonetheless, after one month of searching for ‘access’, the researcher decided to expand the span of his ‘company search’ to encompass all Canadian provinces, in order to increase the probability of quickly finding a ‘suitable’ research setting. Accordingly, more than 55 firms were identified and contacted via email. This initial phase was nothing but a frustrating period for the researcher as it lasted for more than 6 months. Fortunately, by the end of September 2006, the months of eager waiting were rewarded when the researcher obtained access to one of the most renowned large knowledge intensive firms that are based in Canada. The company showed utmost levels of cooperation with the author as it was highly interested in the objectives of the study. The firm urged the researcher however, to maintain by all means, its identity confidential throughout this document. This being said, the investigated firm will be denoted in this thesis by the fictitious name: HITEC.

HITEC is a Canadian multinational company that employs more than 3500 workers in offices around the globe. The firm is listed in the Canadian top 100 employers (for people management and work environment) and is amongst Canada's largest high technology firms. The central features of this firm are similar to the characteristics given to knowledge intensive firms in previous research. Mainly, the majority of HITEC's workforce is highly skilled and educated, and the company offers qualified services by predominantly depending on the skills and knowledge of its workforce (Alvesson, 1995, 2000; Morris and Empson, 1998; Starbuck, 1992). The company functions in high pressure environments characterized by complex customer demands (Frenkel et al., 1999; Hislop, 2008).

Subsequent to a series of meetings with HITEC's corporate management it was decided that the particularities of the investigated company require that the researcher conduct two instead of three case studies. While all divisions in HITEC were in accordance with the literature definition for KIFs, there were key features inside these divisions, which led to the decision of performing two case studies. Firstly, the two examined cases, which by far, were the two largest divisions within HITEC, had a well established and sophisticated HRM system in place. The other divisions in HITEC were much smaller than the chosen cases and were developed recently, which has resulted in these divisions not having a well established and complex HRM system in place; which would have made it difficult to study human resource management inside these divisions (Boxall and Purcell, 2003). Secondly, while the two chosen cases had a rather similar HRM system in place, each division was operating in a different industrial sector. This factor was seen as one that could help in producing meaningful findings by assisting in the analysis and conclusions, through comparisons between the two cases (Yin, 1994), and hence the two cases were judged as a suitable number. Thanks to the generous access provided by HITEC's corporate management, as well as the great motivation of informants inside the two cases, the researcher was able to gather a large body of interesting and valuable information.

The two examined cases represented the two divisions that employed the majority of HITEC's knowledge workers (mostly engineers and high-technology employees). The first division (denoted in this thesis by SAND) is the main

information technology segment of HITEC, and offers high-end information solutions services to internal clients and prestigious external customers from various industries. SAND mostly employs software/system engineers and computer scientists, and has around 1000 employees operating within its boundaries. The second investigated division (denoted in this thesis by AEROS), mainly deals with aerospace technological products of specialized nature, and develops complex aerospace designs for an influential niche clientele. AEROS predominantly employs engineers with a very specific expertise in aerospace work, and encompasses around 600 workers; a more detailed description of the two examined cases is presented in chapter 7. Both investigated cases were based in Canada.

6.4.2. Unit of analysis

According to Yin (1994), the unit of analysis is dependent on the study's main objectives. This could be the investigated organization, a particular division or individual workers. Consequently, following this thesis key aim, knowledge workers are the central interest of this study. In particular, this thesis seeks to study knowledge workers who are in positions of key responsibility (formal responsibility over key factors) inside SAND and AEROS. Therefore, the main unit of analysis in this thesis was knowledge workers, who hold positions of key responsibility in these two divisions. The identification of knowledge workers inside the two studied cases was made during initial discussions with senior management. Based on previous studies on this group of employees, it was determined that knowledge workers in SAND and AEROS, would be the employees in these divisions who possess a strong knowledge and skill base (in terms of quality education and experience) and that are working on tasks that require a constant and intensive usage of intellectual knowledge – tasks that involve solving complex problems for customers using theoretical and/or contextual knowledge, high level of analytical skills, creativity etc. (Alvesson, 2001; Frenkel et al, 1995; Hislop, 2008; May et al, 2002; Robertson and Swan, 2003). This category of workers inside SAND and AEROS represented the vast majority of employees in these two divisions. However, as indicated, this thesis is interested in studying knowledge workers in positions of key responsibility (formal responsibility over key factors) inside SAND and AEROS. Therefore, following discussions with senior management, a list of knowledge workers in such

positions inside each of SAND and AEROS was identified – details on these positions are presented in the subsequent chapter.

6.4.3. Qualitative approach

The aim of this study is to explain ‘how’ context could impact the linkages between knowledge workers’ perception of HR practices and, their organizational commitment and job satisfaction. Whereas quantitative methods (such as employee surveys) can reveal the HR practices that impact workers’ attitudes (i.e. answering the ‘what’ question) they can be less helpful in providing a thorough understanding of ‘how’ and ‘why’ these connections exist. In effect, even though statistical analysis can provide variances between variables it often fails to explain phenomena and/or causal effects.

Qualitative research approaches on the other hand, can result in more degrees of comprehension of the mechanisms that are taking place inside observed patterns – particularly when studying complex interconnections and relationships (Bullock, Little and Millham, 1992). A main characteristic of qualitative data is that it could expose naturally happening occurrences within their natural setting. As Miles and Huberman (1994, p. 10) indicate, qualitative data has the ability to uncover phenomenon that are ‘embedded’ in a particular context. Miles and Huberman (1994) emphasize that qualitative research is both rich and holistic and allows a dense explications and descriptions. One of the strength of qualitative designs is their flexibility and ability to adapt to new findings during the course of the data collection, which can add greatly to the richness of the collected information (Miles and Huberman, 1994). The central disadvantage of a qualitative perspective is that it cannot generalize on the linkages between perception of HR and attitudes (Bryman, 1988). In fact, one of the main methodological limitations of this thesis is that the researcher cannot generalize from the results. Nonetheless, as indicated earlier in this chapter, this thesis does not aim at generalizing across samples of knowledge workers but rather seeks to conduct a detailed and in-depth investigation that could help future researchers in theoretically assessing and examining this thesis’s findings in similar or different settings. One characteristic of qualitative research that is of particular importance for this thesis is the ability of this perspective to have a better assessment of workers’ understanding and perception of the studied phenomena

(Hakim, 1987; Sarantakos, 1998). Qualitative research provides, as highlighted by Hakim (1987, p. 26), 'richly descriptive reports of individuals' perceptions, attitudes, beliefs, views, and feelings, given to events and things'.

6.4.3.1. Semi-structured interviews

In many studies adopting a case study research strategy, and in most research of qualitative nature, interviews are often an essential means of data collection (Miles and Huberman, 1994; Yin, 1993). Interviews can be conducted face-to-face or over the telephone and are defined as discussions with an object (Whitley, 1996). Interviews can enable the researcher to closely interact with informants and hence, have a deeper sense of their perceptions, attitudes and behavior (Purcell et al., 2003). Therefore, interviews could help in understanding workers' perception of HR practices and how these perceptions can be connected with their commitment and job satisfaction.

Interviews can be unstructured, semi-structured, or structured depending on the order and the degree to which the questions were planned prior to the conversation. An unstructured interview is defined as a normal discussion where the researcher can mold the questions depending on the informant and the condition of the interview. Despite the great flexibility of unstructured interviews, these are not standardized which could sometimes impact the classification and analysis of data (Whitley, 1996). On the other hand, a structured interview encompasses specific questions well prepared prior to the interview. This enables consistency across respondents but can put limits on the flexibility and openness of the interview. In turn, semi-structured interviews are more systematic than unstructured ones, but are formatted so as to be flexible and more conversational than structured interviews (Maxwell, 1998). 'Semi structured interviews can be useful as a means of identifying hypotheses and of determining how members of a proposed study population react to questions on various topics and to different ways of phrasing the questions' (Whitley, 1996, p. 424). Semi-structured interviews are often organized into an interview guide that includes topics to be discussed and some predetermined questions (Whitley, 1996). The advantage of semi-structured interviews is that while preset questions are adopted there is a good level of flexibility for the researcher to explore a desired area or uncover new topics (which could very well serve the

purpose of case studies following a qualitative approach). In relation to that, Sayer (2000) explains that such flexibility can help researchers in having a more thorough understanding of particular mechanisms that might deal with individual feelings or attitudes. In effect, scholars claim that semi-structured interviews are often seen as a suitable means to collect data from informants when the examiner is interested in investigating informants' values, views, attitudes, perceptions as well as the significance they give to particular events (Berg, 1989). Since the aim of this thesis is to examine how context could affect the interconnections between perception of HR practices and work attitudes, and in order to ensure the explanatory purpose of conducting interviews as well as avoid unorganized data, this research will employ semi-structured interviews as a primary tool in gathering data. The flexibility found in semi-structured interviews might also help uncovering factors and patterns that could highlight new features that can help further understand this thesis's research questions. Details on the interview process and data collection are presented hereunder.

6.4.4. Main data collection: the two rounds of interviews

Data was collected in two phases: round one between October 2006 and June 2007, and round two between October 2007 and December 2007. The initial stage of round one started with a series of 8 meetings with senior management. The first meeting was conducted with HITEC's Chief financial officer and Corporate Human Capital Director and lasted slightly more than 60 minutes. The purpose of this meeting was to elaborate on the objective of this thesis and to double check that HITEC's features are in accordance with the criteria of a knowledge intensive firm (based on previous research). As well, the purpose of this meeting was to determine what divisions in HITEC are most suitable for the aim of this thesis. The subsequent table presents the main questions asked in this meeting (these questions were initially asked for HITEC then for each division within the organization).

Question	Literature
How do you describe the knowledge and skills of the majority of your workforce	Helps identifying if the company features reflect those of a KIF (Alvesson, 1995; 2000; Starbuck, 1992).
To what extent do you feel that the work conducted in your firm is of an intellectual nature?	Helps identifying if the company features reflect those of a KIF (Alvesson, 1995, 2000; Morris and Empson, 1998; Starbuck, 1992).
Do you describe your firm as one that produces qualified products and/or services, using its personnel knowledge and skills as the major resource?	Helps identifying if the company features reflect those of a KIF (Alvesson, 2000).
Can you describe the environment in which your firm functions?	Helps identifying if the features of the environment reflect those of a KIF environment (Frenkel et al., 1999).
To what extent do you believe that HRM is vital for your firm?	Based on studies emphasizing on the critical role of HRM for KIFs (Alvesson, 2000; Lepak and Snell, 2002; Thomson and Heron, 2002).
What is your overall number of workers?	
Would you describe the HRM system in your firm as a sophisticated one and as being well-established?	Based on Purcell et al. (2003), who indicate that HRM studies can be best conducted in firms that have a well established and sophisticated HRM system in place

Table 6.1: Central questions from 1st meeting with senior management.

Following this conversation, a meeting was held with the Director of SAND, the Director of AEROS and the Corporate Human Capital Director (which lasted around 90 minutes). This meeting was mainly to further introduce these two divisions to the researcher and to put forward the guidelines for identifying who qualifies for the study inside SAND and AEROS. In addition to determining who qualifies for the study (as described in section 6.4.2), the researcher mainly inquired on the two studied cases through the questions presented in table 6.2. A third meeting was conducted with the Corporate Human Capital Director and an HR executive in order to organize the overall data collection process; this meeting lasted approximately 45 minutes. Subsequent to this meeting, 5 other meetings were conducted, where 1 meeting was with the Corporate Human Capital Director and an HR executive, and the other 4 meetings were with the Corporate Human Capital Director. These 5 meetings lasted between approximately 40 and 60 minutes each. Table 6.3 presents the main questions asked in these meetings. Extensive notes were taken by the researcher throughout all of the upper management meetings, and formal documents were presented by senior management.

Question	Literature
What is the nature of the business in each group: type of products/services?	These are important aspects to can help understanding a KIF features (Alvesson, 1995, 2000; Morris and Empson, 1998; Starbuck, 1992).
Can you elaborate on the particular type of work being conducted in each group?	These are important aspects to can help understanding a KIF features (Alvesson, 1995, 2000; Morris and Empson, 1998; Starbuck, 1992).
Please describe the hierarchy and structure in each group?	KIFs can often have flat hierarchies and complex structures which could affect factors such as teamworking and promotion prospects (May et al., 2002).
What is the main strategy of HITEC, and each group?	HRM could shape the main strategies of KIFs (Alvesson, 1995, 2000).
Who are the key clients for each group, can you please describe your business relationship with your main clients? are their demands usually considered as being complex?	Customer demands and problems could help determining the type of knowledge and skills needed in KIFs (Gibbons et al., 1994; May et al., 2002).
Can you please give some insights on the performance and market standing of each group?	
Can you please indicate what would be the main resource(s) that you feel is behind the competitiveness and success of each group?	The skills and knowledge of workers are seen as the main resource behind the success of KIFs (Alvesson, 2000; Lepak and Snell, 2002; Swart and Kinnie, 2004).
Are there any procedures, databases, manuals and patents in each group?	Features of organizational capital (Subramaniam and Youndt, 2005; Youndt and Snell, 2004; Youndt et al., 2004).
How are the procedures, databases, manuals and/or patents in these groups developed? What sort of knowledge is stored in them?	Features of organizational capital (Subramaniam and Youndt, 2005; Youndt and Snell, 2004; Youndt et al., 2004).

Table 6.2: Key questions from 2nd senior management meeting.

Question	Literature
What is the general knowledge and skills background of employees inside each group?	
How do you see the level of knowledge and skills of the employees in each group? How do you compare the workers in each group with other workers in the industry? Are employees in each group experts in particular jobs and functions? How do you describe the creativity and brightness of the employees in each group?	Features of human capital taken from main themes from Subramaniam and Youndt (2004) and Youndt et al. (2004).

Question (continued)	Literature
Can you provide information on the turnover rate of knowledge workers in each group?	Knowledge workers can have high turnover rates, which could affect the mutual relationship between them and their employing KIF (Reed, 1994).
Is there an HR department for both groups, or, each group has a separate HR department?	It is important to understand the present HR policies and HR practices when studying the linkages between perception of HR practices and attitudes (Kinnie et al., 2005; Purcell et al., 2003; Wright and Nishii, 2004).
Can you elaborate on the features and role of the HR department(s)?	
Do you have formally written HR policies?	
If yes, what are these policies? And can you please elaborate on each? (for each group)	
Who designs these policies (for each group)?	
How are these policies executed and applied and by who (inside each group)?	

Table 6.3: Central questions asked on human capital and HRM in senior management meetings.

Subsequent to the meetings with senior management, all identified knowledge workers (according to the criteria exhibited in section 6.4.2 of this chapter) within the two examined cases were initially contacted via email, and an overall number of 106 knowledge workers (68 in SAND and 38 in AEROS) agreed to participate in the thesis. This comprised around 88% of knowledge workers in positions of key responsibility within SAND and 85% of knowledge workers in positions of key responsibility in AEROS – as it was noticed while conducting workers’ interviews, the high number of participating employees in both cases was mainly due to informants’ motivation towards the study and its purpose. Details on the distribution of informants with regard to gender, age, years of experience, years of tenure at HITEC and education level are presented in table 6.4.

	Number of informants	
	SAND	AEROS
Gender		
Male	64	35
Female	4	3
Years of work in company		
1 to less than 2	5	4
2 to less than 5	6	5
5 to less than 10	9	9
10 to less than 15	19	3
15 to less than 20	8	6
20 or more	21	11
Age		
More than 30 less than 40	8	7
40 to less than 50	37	14
50 to less than 60	19	16
60 to less than 65	4	1
Education		
Technical diploma	5	0
BSc. or BEng	30	15
MSc., MEng or MBA	24	19
PhD	9	4
Years of work Experience		
10 to less than 15	7	5
15 to less than 20	15	6
20 or more	46	27

Table 6.4: Distribution of informants' gender, age, experience, tenure and education.

In the meetings with senior management it was decided that the most suitable means of conducting interviews was via telephone. This decision to undergo telephone interviews was mainly taken because senior management advised the researcher of the hectic schedule of informants and mostly of their unpredicted travel schedule (to different locations in Canada, the US and Europe), which could greatly affect the number of participating informants. In fact, after the first couple of weeks of interviewing, it became an almost daily routine for the researcher to reschedule a number of interviews and to conduct phone calls with informants in the four corners of the globe (sometimes at odd hours). As well, due to tight work schedules, many interviews were conducted on the informants' personal cell phones outside of their official working hours. Having said that, telephone interviews have generally been less adopted in qualitative research, and face-to-face interviews were more often the main interviewing technique used by researchers (Novick, 2008). Nonetheless, while more research studies seem to be needed in order to empirically compare interviewing means, there is an increasing interest in telephone interviews and more evidence in support of the quality of the produced data through the latter interviewing technique. For instance, in their comparison between face-to-face and telephone qualitative interview transcripts, Sturges and Hanrahan (2004) did not exhibit any meaningful difference in the richness of the collected data. Moreover, in another evaluation between face-to-face and telephone interviews, Novick (2008) even claims that there was also evidence indicating that informants are at times more at ease disclosing discrete information over the telephone rather than face-to-face. As well, scholars indicate that within certain fieldwork contingencies, such as the need to reach participants at distant geographical locations, the adoption of telephone interviews can be more apposite (with respect to time, cost and number of participants), and generally does not produce lower quality data than face-to-face interviews (Neuman, 1997). The latter view was also shared by Sturges and Hanrahan (2004) who recommend researchers to adopt qualitative telephone interviews when the constraints of fieldwork limit the usage of face-to-face interviewing.

For the purpose of the knowledge workers' telephone conversations, the researcher designed a theory-based interview guide, which was pilot tested by 10 people: 7 friends (4 managers working in Canadian KIFs and 3 PhD candidates) as

well as 3 individuals at HITEC. Subsequent to that, and before the start of the interviewing process, some minor changes were made to some open-ended questions in the original guide. At the start of each interview, the informant was reassured confidentiality and permission was taken to record the interview. All 106 interviews with workers were digitally recorded, and each lasted between 30 minutes and 1 hour (with an average of around 45 minutes per conversation). The eagerness and enthusiasm of a large number of informants towards people management, made this phase of data collection both enjoyable and extremely fruitful for the aim of this thesis. The interview guide is semi-structured in nature and includes open-ended as well as close-ended survey type questions (an example of the knowledge worker interview guide is presented in Appendix A). Semi-structured interview guides were advocated and used in earlier qualitative HRM studies, such as: Boxall and Steeneveld (1999), and, Gratton, Hope-Hailey, Stiles and Truss (1999). The survey questions were used to account for an informant's general opinion (about some particular area), before engaging in an open conversation about the in-depth explanations for 'why' and 'how' this opinion was shaped. It is important to emphasize that the survey questions asked in this thesis were not used to generate measures for statistical analysis, but rather as a means to assist the researcher in his qualitative approach. Combining open-ended qualitative questions with survey questions in employee interview guides has been employed in research studies on People Management and Organizational Performance for the UK Chartered Institute of Personnel and Development (CIPD) – such as Purcell et al., (2003).

Again, the design and development of the interview questions were primarily based on previous studies related to the nature of this thesis's research question (see table 6.5). As exhibited in Appendix A, open-ended questions in the interview guide mainly targeted employees' perception of HRM practices, their attitudes towards their jobs, social capital, organizational capital as well as possible reasons behind their organizational commitment and job satisfaction. The semi-structured and open-ended nature of the interview and questions allowed informants to discuss topics that were not necessarily included in the interview schedule. In relation to that, one of the strength of the data collection phase, is that information was gathered over a relatively long period of time which allowed the researcher to analyse and address newly emerging topics throughout the course of this interview round (Miles and

Huberman, 1994). Consequently, while the general organization of the interview guide remained the same for all informants, some topics were more emphasized and some additional questions were asked, as more knowledge on the investigated employees and the features of the context where they are operating were gathered. The survey type questions included questions related to perception of human resource management, organizational commitment and job satisfaction; all questions were based on previous research. The majority of these questions asked informants to rate sentences or answer questions based on a 5 point Likert-type scale (where 1 represented strongly agree or very satisfied and 5 strongly disagree or very dissatisfied).

Questions	Supporting Literature
<p><i>On perception of HR practices</i></p> <p><i>Job autonomy:</i> How satisfied are you with the amount of influence you have over your job?</p> <p><i>Selection:</i> How satisfied are you with the methods of employee selection used?</p> <p><i>Training:</i> How satisfied are you with the level of training you receive in your current job?</p> <p><i>Career opportunities:</i> Overall, how satisfied do you feel with your current career opportunities?</p> <p><i>Rewards and recognition:</i></p> <p>How satisfied do you feel with your pay?</p> <p>How satisfied are you with your pay compared with the pay of other people that work here?</p> <p>Overall, how satisfied do you feel with the rewards and recognition you receive for your performance?</p> <p>How satisfied do you feel with the benefits you receive other than pay?</p> <p><i>Performance appraisal:</i> How satisfied are you with this method of appraising your performance?</p> <p><i>Performance-related pay:</i> How satisfied are you with your 'performance-related pay' system?</p> <p><i>Teamworking:</i> How would you describe the sense of teamworking in your work group?</p> <p><i>Communication:</i></p> <p>How satisfied do you feel with the amount of information you receive about how your company is performing?</p> <p>I am fully aware of how I contribute to the company achieving its business objectives</p> <p>Everyone here is well aware of the long-term plans and goals of the organization</p> <p><i>Work-life Balance:</i> How well do you feel that your company does in helping you achieve a balance between home life and work?</p> <p><i>Job security:</i> I feel my job is secure</p>	<p>Based on the Work Employment Relations Survey (WERS, 1998, 2004). These questions were used by the Work and Employment Research Center at the University of Bath in studies such as Purcell, Kinnie, Hutchinson, Rayton and Swart, (2003); and Kinnie, Hutchinson, Purcell, Rayton and Swart, (2005).</p>

Questions (continued)	Supporting Literature
<p><i>On organizational commitment</i> I am quite proud to be able to tell people who it is I work for. I sometimes feel like leaving this employment for good. I'm not willing to put myself out just to help the Company. Even if the Company was not doing too well, I would be reluctant to change to another employer. I feel myself to be part of the Company. In my work I like to feel I am making some effort, not just for myself but for the Company as well. The offer of more money with another employer would make me think of changing my job. I would not recommend a close friend to join our staff. To know that my own work makes a contribution to the good of the Company would please me.</p>	<p>Based on Gould-Williams, (2003).</p>
<p><i>On sense of achievement from work</i> How satisfied are you with the sense of achievement you get from your work?</p>	<p>Based on WERS (1998, 2004): used in the Work and Employment Research Center at the University of Bath by studies such as Purcell et al., (2003) and Kinnie et al., (2005).</p>
<p><i>On job satisfaction</i> Overall, I feel I am satisfied with my job I am generally satisfied with the kind of work I do on this job</p>	<p>Based on Hackman and Oldham's (1975) Job Diagnostic Survey.</p>
<p><i>On methods for employee selection</i> Do you know what employee selection methods are used in your group? does your group focus on personality and group/candidate fit?</p>	<p>Based on themes from Leana and Van Buren (1999): selection that accounts for fit in terms of firm norms and values could help enhancing social capital.</p>
<p><i>On type and duration of training</i> Approximately how much formal training do you think you have received over the last year? Was the training off the job or on the job? What was the training for?</p>	<p>Based on Purcell et al. (2003) interview guide: to help identifying the type of training and how much training the employee had.</p>
<p><i>On means for knowledge and skill development</i> Do you develop your knowledge/skills mostly from the training, colleagues, the job, other, please elaborate?</p>	<p>Based on themes from May et al., 2002): knowledge workers often do not look at training as a main source of knowledge advancement; they might rely more on social relations with colleagues and the job they are performing.</p>

Questions (continued)	Supporting Literature
<i>On career objectives and opportunities</i> What are your future career objectives? can you fulfill them here?	Based on themes from May et al., (2002): knowledge workers look for career opportunities in terms of promotional prospects and these are hard to fulfill in flat hierarchies.
<i>On performance appraisal</i> How is your performance appraised?	Based on Purcell et al. (2003) interview guide: to see the means of appraising the informant's performance.
<i>On aspiration for pay</i> Do you believe that pay is a sign of status or value for someone in your position? How do you position your pay in comparison with the external job market?	Based on themes from May et al., (2002) and Reed (1996): pay can be important for knowledge workers as it often represents a sign of value, and because this employee group is generally directed towards the external job market.
<i>On performance-related pay</i> Is your pay related to your individual performance? if yes, how is it related?	Based on Purcell et al. (2003) interview guide: to see if informants view pay as related to their performance.
<i>On team membership and team features</i> Are you part of a team that work together? If yes, can you briefly describe your team?	Based on Purcell et al. (2003) interview guide: to see if informant works in a team and to get insights on the team.
<i>On aspiration for job security</i> How important is it for you to have a secure job?	Based on themes from Reed (1996): knowledge workers can be highly mobile and often do not seek for stability and security in their employment (Reed, 1996).
<i>On social capital features</i> (If member of a team) Do you feel people in your team have common goals? What about your division? Can you describe the level of trust you have towards your colleagues (teammates and co-workers in entire division)?	Based on themes from Leana and Van Buren (1999): common goals and trust are important aspects of social capital in organizations.
<i>On factors that could promote social capital</i> What factors do you believe can help shaping the level of connections and interactions inside your group?	Based on themes from Leana and Van Buren (1999); Adler and Kwon (2002); Nahapiet and Ghoshal, (1998); Youndt and Snell (2004); Youndt et al., (2004): factors like HR practices can help shaping social capital.
<i>On outcomes of social capital on worker</i> How do your relationships and interactions with co-workers affect you?	Based on themes from Leana and Van Buren (1999); Nahapiet and Ghoshal (1998); Burt (1992); Adler and Kwon (2002): social capital can affect knowledge and skill development.

Questions (continued)	Supporting Literature
<p><i>On organizational capital features and outcome on worker</i></p> <p>Are there any work procedures or databases that you use in your work?</p> <p>If yes, can you please elaborate on how these can assist you in your job?</p>	<p>Based on themes from Subramaniam and Youndt (2005); Youndt et al., (2004); Youndt and Snell (2004): organizational capital can be seen in terms of knowledge stored in procedures and databases, and organizational capital can assist employees in their work by providing them with quick access to reliable knowledge related to their jobs.</p>

Table 6.5: First round knowledge workers' interview questions.

As mentioned in the previous paragraph, the researcher was continuously analyzing the collected data throughout the course of the first round of interviews. Eventually, upon the completion of the first interview phase, a preliminary analysis of the whole data from this round was completed. At this stage, the researcher wished to discuss the initial findings and emerging themes with key persons within HITEC. For this purpose, the researcher visited HITEC and conducted a 70 minutes meeting with members of corporate management. In this meeting the researcher presented the initial analysis and helped validating the identified themes as well as the central findings that have emerged from the preliminary analysis of the 106 interviews. In relation to that, Yin (1994) mentions that the validity of a case study can be enhanced if researchers discuss their findings with key individuals within the investigated firm. This view was also shared by Ghauri and Gronhaug (2002) who claim that researchers could enhance their research validity by crosschecking their results with prominent members from the examined organization. According to the latter authors this could also offer a clearer overview of investigated mechanisms and phenomena.

After the first round of interviews and the subsequent meeting with senior management, 3 months of more in-depth data analysis were completed. This analysis has led to a more comprehensive understanding of emerging themes and patterns pertinent to the role of human, social and organizational capital in between

perception of HR practices and employee attitudes. From these themes the researcher judged that providing more direct focus towards certain aspects that are related to the function of the forms of capital could perhaps be more interesting and suitable for the investigation of SAND and AEROS. This has encouraged the researcher to give additional emphasis towards these issues in the current thesis. However, while the various open-ended questions asked during the first round of interviews and the relatively large number of informants have offered good insights on these emerging themes, it was judged that a second round of interviews encompassing more direct and focused questions pertinent to these emerging issues could help in obtaining more robust findings. Because of the depth of the data gathered from the first round of interviews, it was decided that around 20 qualitative interviews targeting specific topics (pertinent to some aspects of the role of the forms of capital in between perception of HR and attitudes; see table 6.6) would likely be suitable to achieve the aforementioned objective. These interviews were semi-structured and encompassed open-ended questions that were designed to allow the researcher to conduct a conversation that is focused particularly on questions pertinent to specific topics (Brown and Humphreys, 2006; Burgess, 1984). An equal number of knowledge workers from both examined cases (that were interviewed in phase 1) were randomly selected and contacted one after the other, until 20 knowledge workers – 8 from AEROS and 12 from SAND – agreed to participate. Again, being constrained by the geographical locations of informants, and in order to decrease the time needed to conclude the second interview round, all interviews were conducted via telephone. All of these conversations were digitally recorded and lasted on average 35 minutes each. The following table presents the main questions that were included in the interview schedule of this second round of knowledge workers' interviews.

Question	Supporting literature
<p>Social Capital For most employees that you have direct knowledge of in your group, do you feel that you can trust them? Can you please elaborate on your answer?</p> <p>In your group, do you generally trust employees that you didn't have much personal knowledge of, or interaction with? Can you please elaborate on your answer?</p> <p>Do you feel that people in your team are willing to define collective goals? What about people across teams in your group?</p> <p>Do you feel that people in your team have the ability to define collective goals? What about people across teams in your group?</p> <p>Do you feel that people in your team cooperate and coordinate work amongst each other, in order to achieve collective goals? What about people across teams in your group?</p>	<p>Based on main themes from Leana and Van Buren (1999), with regard to the components of social capital in organizations: in terms of trust and associability.</p>
<p>Perception of HR practices and social capital For HR practices, ask informant to tell if s/he view them as affecting her/his: Trust towards co-workers Willingness (and ability) to share common goals with co-workers? Willingness (and ability) to cooperate with co-workers when reaching common goals?</p>	<p>Based on themes from previous research on links between HR practices and aspects of social capital (Bigley and Pearce, 1998; Dyer and Noboeka, 2000; Leana and Van Buren, 1999; McKnight et al., 1998; Nahapiet and Ghoshal, 1998).</p>
<p>Organizational capital Can you elaborate please on the sort of knowledge and information that is stored in your group's databases, processes and manuals?</p>	<p>Based on main themes on the features of knowledge (knowledge from previous projects and experiences, regulations, specifications, scientific proofs etc.) that could be stored in a firm's organizational capital (Subramaniam and Youndt, 2005; Youndt and Snell, 2004; Youndt et al., 2004).</p>
<p>Perception of HR practices and organizational capital Do you feel that there are certain HR practices in your group that encourage you to contribute towards your group's manuals, databases, processes?</p>	<p>Based on themes that HR practices can encourage workers to contribute to a firm's organizational capital (Hansen et al., 1999; Youndt and Snell, 2004; Youndt et al., 2004).</p>

Question (continued)	Supporting literature
Link between human capital and social capital Do you feel the knowledge, skills and experience of people in your group can facilitate collective work? and reaching a common understanding of objectives ?	Based on themes from previous research on links between human capital and aspects of social capital (Brown and Duguid, 2001; Cicourel, 1973; Leana and Van Buren, 1999; Youndt and Snell, 2004).
Type of knowledge needed Can you please describe to me the type of knowledge and skills that you mostly need in your work? And how can you best acquire them?	Themes from debate over whether knowledge workers rely on contextual and/or theoretical knowledge (May et al., 2002; Reed, 1996).

Table 6.6: Main questions included in the schedule for the 2nd round of knowledge workers' interviews.

All recorded interviews from both phases were manually transcribed by the researcher, and each interview transcription was completed on average in 6 hours. The researcher restrained from using computer-aided transcription software to assist in the data collection, as he believes that the 'good old' transcription techniques would enable a closer examination and overview of all interviews – which proved to be helpful in the analysis. When necessary, in the interview transcriptions, side notes and remarks were added by the researcher. The transcription of digitally recorded interviews was initiated in parallel with the data collection period. This has assisted in the preliminary analysis, as it helped in obtaining a general view of possible trends at fairly early stages of the research endeavor. During the transcription process the researcher sometimes eliminated small parts of the interviews that were judged to be irrelevant to the purpose of the study. This has to a certain extent helped in the organization and categorization of the transcribed data. Upon completion of the transcription of all conducted interviews, the researcher was found with around 420,000 words of qualitative data.

6.4.5. Secondary Data

While the interview data was the primary source of information used in this study, information from other sources were also collected throughout the course of the research. As indicated, HITEC's senior management offered the researcher access to

a wide array of company records (around 100 documents or items). These were related to factors such as human resource management, organizational performance, market standing and employee attitudes. Examples of the latter documents are: human resource policies, detailed annual financial reports for the past five fiscal years, corporate management market briefings audio tapes, soft skills training manuals, press releases, documents illustrating general aspects of work, company history videotape, as well as human resource surveys of employees operating within SAND and AEROS; in order to limit the researcher personal bias it was agreed with corporate management that it would be more suitable if the researcher receives the results of prior company surveys after the completion of the first round of data analysis. In addition to the access provided for some company records and documentations, the researcher also conducted some observations within the workplace of the investigated settings. The confidentiality of many projects conducted inside the two examined divisions made it difficult for the researcher to observe working groups 'on the job' interactions. Therefore, the onsite observations served more as a means to familiarize the researcher with the physical environment where informants usually operate, rather than attempting to study real time work interactions (such sorts of interconnections were mainly investigated throughout the interviewing process). In sum, the secondary data played a valuable assisting role in advancing the researcher knowledge of human resource managements within SAND and AEROS as well as familiarizing him with the nature of knowledge workers' work, the work processes and regulations, aspects of management strategies and company performance. In some instances, comparisons of findings with previous company surveys helped in validating some of the results (Yin, 2003).

6.5. Analysis

Miles and Huberman (1994, p. 91) claim that in qualitative data analysis 'the researcher typically moves through a series of analytical episodes that condense more and more data into a more coherent understanding of what, how and why'. In case studies, data analysis generally involves the examination of what has occurred in a particular case, the formalisation of constituents of the case, finding central variables, and building a framework that exhibits 'how' and 'why' these variables are interconnected (Miles and Huberman, 1994).

In this thesis, the analysis was mainly based on data reflecting informants' perceptions and statements, insights from discussions with senior management and information on the contexts of the studied divisions. As indicated in the aforementioned section, data collection and data analysis were not two distinctively separate phases, but rather interconnected stages. Such an approach is highly advocated by scholars as it allows the qualitative researcher to direct her or his data collection process according to the themes and patterns that are emerging within the examined cases (Bechhofer, 1974; Bryman and Burgess, 1993; Burgess, 1984; Miles and Huberman, 1994). Effectively, in parallel with the data collection phases, the author was transcribing interviews, building data categories, taking notes of emerging themes and attempting to address those in upcoming conversations. Throughout the latter process, the researcher examined and re-examined interview transcriptions as well as any secondary data evidence, which has led to a constant development or refinement of general categories, themes and patterns. It is important to note here however, that while data analysis has helped enlighten the data gathering, the researcher did not make any final conclusions throughout the entire data collection process in order not to omit certain key elements that might be helpful in uncovering certain phenomena.

Before elaborating on the stages of the data analysis, it is helpful to note that Miles and Huberman (1994) have warned researchers that the vast amount of data that could be collected through qualitative methodological approaches could sometimes lead to confusion, mislabels or miscoding. For this reason, since the early phases of the data gathering the researcher made every possible effort to develop a working scheme that would allow a systematic approach to data analysis. For instance, the author kept a research diary that accounted on a daily basis for the researcher's updated views of the data collection and analysis process. This has greatly helped in following up with developing thoughts from the interviews as well as relating emerging findings with parts of the academic literature. In addition, at the end of each interview round, even though the analysis was already initiated, the researcher went through an in-depth and comprehensive analysis that revisited all interview transcripts. This has assisted in keeping a systematic as well as an organized approach and helped preventing the omission of some themes or patterns that were not noted from earlier conversations' transcripts.

The data analysis in this thesis was mainly reliant on Miles and Huberman (1994) three key data analysis steps: the categorization of data, the generation of themes, patterns and relationships, and, the development of explanatory frameworks based on the identified themes and connections. While these phases can be clearly separated, it is important to note that throughout the analysis, and to achieve a more thorough understanding and refinement of findings, the researcher had at times, to move back and forth amongst these stages. The analysis of themes and relationships between data was conducted both within each investigated case and across the two examined case studies (Miles and Huberman, 1994; Yin, 2003). Across cases evaluations of themes and findings has greatly helped in the assessment of phenomena and mechanisms. It is also helpful to mention that, whereas the data analysis was systematically accounting for comparisons across cases, the analytical process was also conducted in a methodical manner based on elements such as: age of informants, education level, the level of work experience, company tenure, the type of work positions etc.

In relation to the first phase of the analysis process, this involved the organization of interview transcripts and relevant documents into categories that were generally based and derived from theories and concepts relevant to this thesis. In order to help the researcher in working through the large amount of gathered data, broad categories were firstly developed (where codes were assigned to different clusters). Within each of these categories a number of coded sub-categories were then determined. Most of the initial categories and sub-categories that were identified were mainly coded as 'descriptive' codes, as the majority of them did not encompass interpretations (Miles and Huberman, 1994, p.57). As the researcher became more aware of particular factors in the data, more 'interpretative' categories and sub-categories (and their matching codes), gradually emerged (ibid). Evidently, as indicated, categories, sub-categories and their corresponding codes were at times, updated and refined concurrently with any progress in the analysis (Miles and Huberman, 1994).

The second phase of the analytical process comprised the aggregation of data and the identification of themes, patterns and trends from the collected information. This phase encompassed the emergence of what Miles and Huberman (1994, p. 57)

call 'pattern' codes, which are more explanatory than the above types of codes, and generally represent an identified theme, pattern and/or a possible linkage between categories.

The third level of the analytical process involved the synthesis of patterns and themes leading towards the explanatory framework. Spider maps and matrix analysis of main themes from the data as well as comparisons with previous theory were mostly conducted throughout this analysis phase. These were repeated several times before final explanations were developed and conclusions were made. It is worth mentioning here that, while merging the data findings (various identified themes and patterns) with earlier theories and conceptualisations was a main activity at this level, the researcher was constantly consulting previous theories and articles throughout the analysis phase.

Due to the large amount of gathered data, the researcher decided to use a 'counting' technique as part of the analysis. Scholars indicate that 'counting' in qualitative data analysis could offer a valuable tool for researchers examining large amounts of data (Miles and Huberman, 1994; Silverman, 1993). When analysing bulky qualitative data, 'counting' can have the advantage of enabling the researcher to see quickly through the data as well as reduce the chance of the investigator losing sight of important signals in the data, due to the researcher bias towards a predetermined study aim (Miles and Huberman, 1994). According to the latter authors, qualitative researchers conduct their work with a certain level of personal intuition. This could pose problems for qualitative analysis in case such intuitions were false or researchers tended to 'overweight facts they believe in or depend on, to ignore or forget data not going in the direction of their reasoning, and to see confirming instances far more easily than disconfirming instances' (Miles and Huberman, 1994, p. 253). This could lead to researchers 'differentially weighting information by looking at part of the data, not all of them' (ibid). Therefore, using 'counting' in qualitative analysis for large amount of data can help confirming the strength of a qualitative researcher's insights. In this thesis, the counting technique was mainly used to determine the frequency of defined codes (i.e. the number of informants who have a certain code present in their interview transcripts against the overall number of informants) (Silverman, 1993); more details on the frequency of

codes used in this thesis are provided in the analytical chapters. In sum, the ‘counting’ of factors such as themes, patterns and trends in this thesis was mainly adopted to help in backing up the researcher insights and to assist in reducing personal bias (Miles and Huberman, 1994; Silverman, 1993).

As indicated earlier, employee relationships and human resource activities usually occur in open systems, which imply that achieving an in-depth understanding of particular connections could, in this case, be predominantly obtained through qualitative data (Sayer, 1992). Accordingly, with regard to the survey questions asked throughout the first round of the interviewing process, it is important to reaffirm that the researcher solely used the survey data as a means of informing and supporting the qualitative information (Silverman, 1993); and not to produce statistical outcomes. Knowledge workers’ responses to survey questions have assisted in portraying a broad picture of opinions towards some issues and areas of interest to this study (such as perceptions of HR practices). These have helped guiding and directing the analysis of the qualitative records, by contributing towards the identification of some preliminary and/or general data trends.

6.6. Conclusion

This thesis is aiming at explaining how human, social and organizational capital can influence the interconnections between knowledge workers’ perception of HR practices and, their organizational commitment and job satisfaction. In its attempt to achieve its key objective, this thesis follows a case study strategy and pursues a qualitative research approach (Bullock, Little and Millham, 1992; Purcell et al., 2003; Yin, 1994). After giving an overview of the research methods employed in this thesis, the next chapter presents data on the main characteristics of the two examined cases: SAND and AEROS.

CHAPTER 7

Cases context

7.1. Introduction

This chapter is the first in a series of chapters (chapters 7, 8, 9, 10 and 11) that present the main data collected in this thesis along with an analysis of this data. Chapter 7 aims at informing the subsequent analytical episodes (chapters 8, 9 and 10). Chapter 8 then presents the within-case analysis of the impact of perception of HR practices on, organizational commitment and job satisfaction. Subsequently, chapter 9 provides the within-case analysis of the role of human, social and organizational capital in the interconnections between perception of HR practices and, organizational commitment and job satisfaction. Following that, chapter 10 cross examines the main themes presented for each case in chapters 8 and 9. After providing the within-case analysis and the cross-examination of data between SAND and AEROS, chapter 11 comprehensively presents the key findings of this thesis and, contrasts these results with the previous research and expected connections that were discussed in chapter 5.

The current chapter starts by presenting a general overview of the main characteristics of SAND and AEROS. Subsequently, as this thesis aims at investigating the role of forms of capital in between perception of HR practices and attitudes this chapter provides more insights into the features of these divisions, by particularly elaborating on the attributes of human, social and organizational capital inside SAND and AEROS. While the presented features of human capital describe some key attributes of workers within these two divisions, this chapter provides further data pertinent to the education level, experience and job positions of informants inside SAND and AEROS. Following that, this chapter elaborates on the human resource management within SAND and AEROS. In particular, as this thesis intends to address knowledge workers' perception of the actual HR practices that are enacted within the organization (Chang, 1999, 2005; Gartner and Nollen, 1989; Gould-Williams, 2004; Kinnie et al., 2005; Macky and Boxall, 2007; Meyer and Smith, 2000; Purcell et al., 2003, 2009; Wright and Nishii, 2004), this chapter

presents the formal HR policies that exist inside SAND and AEROS and describes the effective implementation of these policies in practice within these two divisions.

7.2. General overview of the main characteristics of SAND and AEROS

Before providing an overview of the key features of SAND and AEROS, it is perhaps helpful to briefly reintroduce HITEC. As exhibited in the previous chapter, HITEC is a Canadian multinational organization that employs more than 3500 workers in various offices around the globe. The company is renowned for offering technological solutions and consultancy to large public and private entities. Such services could range from the development of high-end hardware designs to the creation of innovative software solutions and packages. Throughout the years, the organization has built a worldwide reputation of assisting prestigious customers in enhancing their performance and improving their decision making. According to the company's senior management, HITEC's main competitive asset is the value and uniqueness of the knowledge and capabilities that it encompasses. The HITEC firm is built around various groups or divisions dedicated to different market segments, business sectors or types of technologies. Amongst these groups, SAND and AEROS possess the largest knowledge workforce population of HITEC (the main characteristics of the majority of employees in these two divisions are presented in this chapter). As indicated in chapter 6, SAND and AEROS are both based in Canada.

7.2.1. Overview of the main characteristics of SAND

SAND is the core information technology (IT) division of HITEC and as mentioned in chapter 6, it employs around 1000 employees. Interviews with senior management have indicated that SAND primarily relies on the knowledge and skills of its core workforce, in order to provide a variety of high-end information solutions services to a large number of influential and recognized worldwide clientele. This feature of SAND corresponds with a central characteristic given to knowledge intensive firms in the academic literature (Alvesson, 1995, 2000). The nature of SAND's customers sometimes means that this division's work could have noticeable impact on societies. SAND's jobs revolve around highly diversified services that can range from

consulting clients on particular IT domains to the full development of information solutions packages. Senior management has commonly pointed that these jobs normally encompass intricate and challenging tasks and, that the group functions under extremely competitive market conditions, which are characterized by constant change. Such job characteristics have been emphasized as forming key attributes of the work within many of today's knowledge intensive organizations (Alvesson, 2000; Alvesson and Willmott, 2002; Hatch and Schultz, 2002; Purcell et al., 2009).

The work within the SAND group revolves around a project-based structure, where jobs are divided amid programs and each program encompasses several projects. This structure was described in earlier studies as a widespread organizational form within KIFs, as it helps promoting knowledge exchange and creation (Alvesson, 1995; Lam, 2005; May et al., 2002; Thomson and Heron, 2002). At the time of the study, the SAND division was conducting dozens of projects of diverse IT work nature and directed toward different customers' needs. In general, the time frame for each project varies between few months and a couple of years. Each project encompasses one or more working teams and almost all employees within SAND operate inside these teams. In addition to the project-based structure, SAND is characterised by a fairly flat organizational hierarchy, particularly towards the middle-level positions; the interviewed workers (in SAND) had 2 or 3 layers below them and 0 or 1 level between their positions and senior management.

While this subsection has provided an overview of the main characteristics of SAND, the features of human, social and organizational capital in this division are presented in the following section (section 7.3). As well, while subsection 7.3.1 presents some key characteristics of the majority of employees in SAND (through its discussion of the features of human capital in this division), section 7.5 of this chapter offers some additional insights pertinent to the attributes of informants in this division.

7.2.2. Overview of the main characteristics of AEROS

AEROS is a global leader in an aerospace market segment and, as exhibited in chapter 6, it encompasses around 600 employees. The AEROS division is known for

heavily investing in in-house research and development as well as funding research in institutions and universities across Canada. AEROS's work is highly specialized and revolves around a few complex and prestigious aerospace product designs. Senior management has indicated that this group primarily uses the knowledge and experience of its workforce to provide specialized aerospace designs to customers ranging from large private sector organizations to governmental entities. This attribute of AEROS relates to a main characteristic given to knowledge intensive firms in scholarly papers (Alvesson, 1995, 2000). The type of work in AEROS could be described as being more specialized and less diversified than the SAND division. Similar to the SAND division however, senior management has pointed that AEROS's work is often characterized by challenging and complex tasks. This feature of AEROS also resonates with previous studies describing the main attributes of knowledge intensive organizations (Alvesson, 2000; Alvesson and Willmott, 2002; Hatch and Schultz, 2002; Purcell et al., 2009).

AEROS has a project-based structure (Alvesson, 1995; Lam, 2005; May et al., 2002), where the work is divided around programs that enclose various projects. AEROS has a fewer number of projects than SAND, but these are relatively larger than those of the latter division. AEROS projects have higher budgets and typically last much longer than the SAND division (some projects could last for a period of around 10 years). All projects revolve around working teams and most of AEROS employees operate inside these teams. Moreover, this division also has a fairly flat organizational hierarchy, mainly towards middle-level positions; with 2 or 3 layers below the studied workers (in AEROS) and 0 or 1 level between their positions and senior management.

Whereas this subsection has presented an overview of the key characteristics of AEROS, the attributes of human, social and organizational capital in this division are provided in section 7.4. Moreover, whilst subsection 7.4.1 provides the main features of the majority of workers in AEROS (through its discussion of the attributes of human capital in this division), section 7.5 describes further insights related to the characteristics of informants in AEROS.

7.3. The SAND context: human, social and organizational capital

As this thesis is interested in investigating the role of human, social and organizational capital in between knowledge workers' perception of HR practices and their attitudes, the main features of these forms of capital inside the SAND division are presented hereunder.

7.3.1. SAND's human capital

Human capital is defined as individuals' knowledge, skills, abilities and intellect (Becker, 1964; Schultz, 1961; Subramaniam and Youndt, 2005; Swart, 2006; Youndt et al., 2004). Senior management has described SAND's workforce as overwhelming encompassing employees that possess a degree (in science or engineering) from a well-recognized university, with almost half of the workforce having a graduate degree (in science, engineering or business). The majority of the scientific and engineering degrees are related to information technology domains such as: software engineering, computer engineering, communication engineering and computer sciences. In relation to experience, senior management have indicated that SAND's junior workforce is often hired 'right out' of university and therefore, possesses little working experience. Conversely, the rest of the workforce in this division has commonly been described by senior managers as being highly experienced. Senior management has mentioned that this experience was generally gathered within SAND and/or from well-known companies within the same sector of this division; which appears to indicate that this division encompasses many workers who possess sector-specific experience. Senior management has also pointed that the majority of the experienced workers in this division have acquired many years of experience inside SAND, which could mean that this division encompasses many employees who possess firm-specific knowledge and experience.

Senior management interviews point that the nature of the information technology domains in which SAND's workers operate often necessitate that they improve existing information systems technologies and/or develop drastically new ones. Upper management indicated that, in such tasks, this division's informants need to intensively use their knowledge and/or experience to achieve their work

objectives; a feature that resonates with key characteristics given to knowledge workers in previous studies (Alvesson, 2001; Frenkel et al., 1995; Hislop, 2008). Particularly, senior management has mentioned that in addition to intensively using strong knowledge of certain software codes and programming languages, employees in SAND need to constantly be able to deal with complex customer demands and to apply high degrees of problem solving skills.

Overall, the SAND's workforce was described by senior management as possessing knowledge and skills that are in high demand in the information technology job market; there is continuous competition amongst firms in the industry to acquire and retain such type of human capital. In comparison with other companies within the same sector, senior management has often emphasized that they view most employees in SAND as being amongst the 'very top' in the industry.

7.3.2. Characteristics of social capital in SAND

The attributes of social capital in SAND were primarily determined based on the data collected from informants inside this division. Social capital is seen 'as a resource reflecting the character of social relations within the firm' (Leana and Van Buren, 1999, p. 540). The constituting elements of social capital in SAND are examined based on two main components: associability and trust (Leana and Van Buren, 1999). Associability is defined as 'the willingness and ability of participants in an organization to subordinate individual goals and associated actions to collective goals and actions' (Leana and Van Buren, 1999, p. 541). The second component of social capital, trust, is delineated as 'a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviour of another' (Rousseau et al., 1998, p. 395). To help conducting the analysis of social capital's features in SAND, codes related to the associability and trust categories of this construct were defined (based on Leana and Van Buren, 1999) and when applicable, allocated to verbatim statements from SAND informants' interview transcripts. As the SAND group is characterized by a team-based structure, associability and trust were examined inside SAND's teams and across teams in the entire division. The following table presents a list of key codes used in the analysis of social capital inside SAND.

Code	Definition
<i>Willingness to define collective goals in teams</i>	Describes most teammates as willing to define collective goals inside teams.
<i>Lack of willingness to define collective goals in teams</i>	Describes most teammates as not willing to define collective goals inside teams.
<i>Ability to define collective goals in teams</i>	Describes most teammates as able to define collective goals inside teams.
<i>Lack of ability to define collective goals in teams</i>	Describes most teammates as not able to define collective goals inside teams.
<i>Willingness to define collective goals across teams</i>	Describes most co-workers as generally willing to define collective goals across teams in the division.
<i>Lack of willingness to define collective goals across teams</i>	Describes most co-workers as generally not willing to define collective goals across teams in the division.
<i>Ability to define collective goals across teams</i>	Describes most co-workers as generally able to define collective goals across teams in the division.
<i>Lack of ability to define collective goals across teams</i>	Describes most co-workers as generally not able to define collective goals across teams in the division.
<i>Collective action in teams</i>	Describes cooperation amongst most teammates when enacting collective goals inside teams.
<i>Lack of collective action in teams</i>	Describes lack of cooperation amongst most teammates when enacting collective goals inside teams.
<i>Collective action across teams</i>	Describes that co-workers in general cooperate amongst each other when enacting collective goals across teams in the division.
<i>Lack of collective action across teams</i>	Describes a general lack of cooperation amongst co-workers when enacting collective goals across teams in the division.
<i>Fragile trust in teams</i>	Describes trust that an individual has towards most members inside his/her team(s): based on perception of direct possibility of rewards and benefits.
<i>Fragile trust across teams</i>	Describes trust that an individual has towards most members across teams inside the division: based on perception of direct possibility of rewards and benefits.
<i>Resilient trust in teams</i>	Describes trust that an individual has towards most members inside his/her team(s): trust that goes beyond the direct expectation of rewards and that is dependent on perception of values and moral integrity.
<i>Resilient trust across teams</i>	Describes trust that an individual has towards most members across teams inside the division: trust that goes beyond the direct expectation of rewards and that is dependent on perception of values and moral integrity.

Table 7.1: Definition of key codes used in the analysis of the main features of social capital in SAND and AEROS.

After allocating the codes (for associability and trust) to corresponding verbatim statements from SAND's informants' interviews, summary tables were developed to help in performing the analysis (Miles and Huberman, 1994). Firstly, tables were constructed and displayed as 'informant-by-code' tables, in order to assist the researcher in analyzing the views given by different informants (Miles and Huberman, 1994). Secondly, in order to condense the data and help reaching conclusions, the 'informant-by-code' tables were used to determine the frequency of each code (i.e. for each code: the number of informants who have this code present in their interview transcript against the overall number of informants). This has resulted in the creation of a table that includes the frequencies of codes for social capital in SAND (table 7.4 next, presents the frequencies of the key codes related to social capital in SAND). As indicated in chapter 6, more focused questions on social capital were asked in the second round of interviews (as seen in table 6.6, for questions asked in the second interview round). For this reason, in presenting the frequencies for different key codes, the following table provides the frequencies of codes based on all informants (denoted in the table as 'frequency from both rounds'), but also presents the frequency of codes for informants in the second round of interviews (marked in the table as 'frequency from second round'). The 'frequency from both rounds' is the frequency of a code for all interviewed informants in SAND, whether these informants were interviewed in round one only or both rounds. As for the 'frequency from second round' it is the frequency of a code for informants from the second round only. This distinction can assist the reader in seeing the occurrence of a certain code over all interviewed informants, as well as the frequency of this code in the second interview round; where more direct questions related to this code were asked. It is important to mention that, whilst a certain code could have been present in the two interview transcripts of an informant (who contributed to the two rounds of interviews), the 'frequency from both rounds' for this code does not account twice for this informant.

Code	Frequency
<i>Willingness to define collective goals in teams</i>	39/68 (frequency from both rounds) 12/12 (frequency from second round)
<i>Lack of willingness to define collective goals in teams</i>	4/68 (frequency from both rounds) 0/12 (frequency from second round)
<i>Ability to define collective goals in teams</i>	37/68(frequency from both rounds) 12/12 (frequency from second round)
<i>Lack of ability to define collective goals in teams</i>	2/68(frequency from both rounds) 0/12 (frequency from second round)
<i>Willingness to define collective goals across teams</i>	38/68(frequency from both rounds) 11/12(from second round)
<i>Lack of willingness to define collective goals across teams</i>	6/68(frequency from both rounds) 0/12(frequency from second round)
<i>Ability to define collective goals across teams</i>	36/68 (frequency from both rounds) 11/12(frequency from second round)
<i>Lack of ability to define collective goals across teams</i>	6/68 (frequency from both rounds) 1/12(frequency from second round)
<i>Collective action in teams</i>	48/68(frequency from both rounds) 12/12 (frequency from second round)
<i>Lack of collective action in teams</i>	5/68(frequency from both rounds) 0/12 (frequency from second round)
<i>Collective action across teams</i>	45/68(frequency from both rounds) 11/12(frequency from second round)
<i>Lack of collective action across teams</i>	6/68(frequency from both rounds) 1/12(frequency from second round)
<i>Fragile trust in teams</i>	4/68(frequency from both rounds) 0/12(frequency from second round)
<i>Fragile trust across teams</i>	5/68(frequency from both rounds) 1/12(frequency from second round)
<i>Resilient trust in teams</i>	60/68(frequency from both rounds) 12/12(frequency from second round)
<i>Resilient trust across teams</i>	57/68(frequency from both rounds) 11/12(frequency from second round)

Table 7.2: Frequencies of key codes used in the analysis of the main features of social capital in SAND.

The conclusions related to the features of social capital in SAND were mainly reliant on the table for the frequencies of key codes pertinent to aspects of social capital. The data points that social capital in SAND seems to be characterized by the existence of associability, both inside teams and between employees across

teams throughout the entire division. In particular, the SAND division seems to be characterized by the presence of collective goals and action both inside and across teams within this division. As seen in table 7.2, the majority of informants in SAND have mentioned that this division's workers are generally willing and able to define common goals inside and across teams in SAND – these themes were present in the transcripts of the overwhelming majority of informants from the second round of interviews, where direct and more focused questions pertinent to common goals were asked. It is worth noting also that there were little indications in the data pointing toward a lack of willingness and ability to define collective goals in teams and across teams amongst SAND's employees. Moreover, as presented in table 7.2, the majority of informants in SAND have indicated that collective action exists both inside and across teams within their division – these themes were apparent in the transcripts of the vast majority of informants from the second round of interviews, where more focused and direct questions on collective action were asked. There were also little indications in the data pointing towards a lack of collective action inside and across teams within this division. These likely signs of associability inside and across teams in SAND were described by authors as indicators of a strong social capital in organizations (Leana and Van Buren, 1999; Nahapiet and Ghoshal, 1998). In parallel, as seen in table 7.2, most informants in this division have expressed feelings of resilient trust towards most members in their team(s) and across teams inside SAND. The presence of resilient trust between employees was described by scholars as an aspect that could reflect a strong social capital inside business entities (Leana and Van Buren, 1999; Putnam, 1993; Ring and Van de Ven, 1992).

7.3.3. SAND's organizational capital

Organizational capital is delineated as the knowledge that a firm stores in its procedures, structures, systems, routines, databases, patents and/or manuals (Hall, 1992; Keenan and Aggestam, 2001; Subramaniam and Youndt, 2005; Swart and Kinnie, 2007; Walsh and Ungson, 1991; Youndt et al., 2004). The interviews with senior management have indicated that the SAND division has little procedures, databases and patents that store knowledge related to the work that is conducted by employees in this division. Senior management has pointed however, that there are a number of manuals in this division that contain knowledge related to software codes

pertinent to a particular programming language. The type of knowledge that is stored in SAND's manuals was also examined in the second round of interviews. All of the 12 informants in this round have indicated that these manuals mainly contain knowledge and information that deal with software codes and programming languages that are related to the different information technology systems built by this division. 7 informants from the second interview phase have further explained that these manuals can be acquired from sources outside of SAND and there are a number of software code manuals that were developed inside this division.

7.4. The AEROS context: human, social and organizational capital

To assist in understanding the role of the forms of capital within the perception of HR practices and attitudes connection for informants in AEROS, the subsequent paragraphs present the main features of human, social and organizational capital inside this division.

7.4.1. AEROS's human capital

As indicated earlier, human capital is defined as individuals' knowledge, skills, abilities and intellect (Becker, 1964; Schultz, 1961; Subramaniam and Youndt, 2005; Swart, 2006; Youndt et al., 2004). Senior management has described the workforce in AEROS as overwhelmingly possessing a degree (in science or engineering) from a well-recognized university, with more than half of employees in this division having a graduate degree (in science, engineering or business). The vast majority of the scientific and engineering degrees are related to areas such as: aeronautical and aerospace engineering, mechanical engineering, mathematics and physics. With regard to experience, senior management has mentioned that most junior employees in this division are experienced and, the rest of the workforce is highly experienced – even in selecting the more junior employees, previous experience in AEROS's aerospace domain is seen as a major asset for candidates. Senior management has pointed that the experience that AEROS's workforce possesses is often into a highly specialized, distinct and limited aerospace area. The interviews with senior management indicate that most employees' experience is acquired within AEROS and/or from a number of well-recognized aerospace organizations from around the globe; which seems to indicate that most employees in this division possess sector-

specific experience. Similar to SAND, senior management has also mentioned that the majority of the experienced workers in AEROS have gathered many years of experience inside this division; which appears to indicate that AEROS has many workers who possess firm-specific knowledge and experience.

Senior management has indicated that the nature of the aerospace domain in which AEROS's employees function often requires that they improve the designs of specialized aerospace products. Upper management has mentioned that, in such a job, AEROS informants need to rigorously use their knowledge and experience in order to achieve their daily tasks; which is a key attribute given to knowledge workers in the academic literature (Alvesson, 2001; Frenkel et al., 1995; Hislop, 2008). In particular, senior management has stated that, in addition to intensively using a strong knowledge in dealing with mathematical and physics problems, workers in AEROS need to constantly use specific knowledge pertinent to the aerospace products that they are designing.

Overall, AEROS's employees were described by senior management as being rare to find on the job market – due to the highly specialized knowledge and experience that they possess. Senior management has indicated that because of this rare expertise that AEROS seeks to acquire, one of this division's biggest challenges is to search for and attract very specific human capital from the four corners of the globe.

7.4.2. Characteristics of social capital in AEROS

The attributes of social capital in AEROS were defined and studied following the same steps, and guidelines used in analyzing the features of social capital in SAND (explained in section 7.3.2). The subsequent table presents the frequencies of the key codes related to social capital in AEROS (see table 7.1 for definition of these main codes).

Code	Frequency
<i>Willingness to define collective goals in teams</i>	25/38 (frequency from both rounds) 8/8 (frequency from second round)
<i>Lack of willingness to define collective goals in teams</i>	1/38 (frequency from both rounds) 0/8 (frequency from second round)
<i>Ability to define collective goals in teams</i>	24/38 (frequency from both rounds) 8/8 (frequency from second round)
<i>Lack of ability to define collective goals in teams</i>	0/38 (frequency from both rounds) 0/8 (frequency from second round)
<i>Willingness to define collective goals across teams</i>	4/38 (frequency from both rounds) 1/8 (frequency from second round)
<i>Lack of willingness to define collective goals across teams</i>	21/38 (frequency from both rounds) 7/8 (frequency from second round)
<i>Ability to define collective goals across teams</i>	2/38 (frequency from both rounds) 1/8 (frequency from second round)
<i>Lack of ability to define collective goals across teams</i>	23/38 (frequency from both rounds) 7/8 (frequency from second round)
<i>Collective action in teams</i>	29/38 (frequency from both rounds) 7/8 (frequency from second round)
<i>Lack of collective action in teams</i>	3/38 (frequency from both rounds) 1/8 (frequency from second round)
<i>Collective action across teams</i>	0/38 (frequency from both rounds) 0/8 (frequency from second round)
<i>Lack of collective action across teams</i>	22/38 (frequency from both rounds) 8/8 (frequency from second round)
<i>Fragile trust in teams</i>	13/38 (frequency from both rounds) 3/8 (frequency from second round)
<i>Fragile trust across teams</i>	3/38 (frequency from both rounds) 0/8 (frequency from second round)
<i>Resilient trust in teams</i>	23/38 (frequency from both rounds) 5/8 (frequency from second round)
<i>Resilient trust across teams</i>	9/38 (frequency from both rounds) 2/8 (frequency from second round)

Table 7.3: Frequencies of key codes used in the analysis of the main features of social capital in AEROS.

The conclusions related to the characteristics of social capital in AEROS were primarily based on the table for the frequencies of key codes pertinent to features of social capital in this division. The data indicates that social capital in AEROS seems to be characterized by the existence of associability inside teams but

much less between employees across teams throughout this division. Particularly, in AEROS, there seems to be collective goals and action inside teams with little signs of these elements of social capital across teams within this division. As indicated in table 7.3, the majority of informants in AEROS have stated that this division's employees are commonly willing and able to define collective goals inside their teams – such themes were present in all transcripts from the second interview phase, where more direct and focused questions on common goals were asked. There was as well, very little evidence showing a lack of willingness and ability to define collective goals inside AEROS teams. Conversely, as seen in table 7.3, the majority of informants in AEROS have stated that workers in this division are generally not willing and able to define collective goals across teams – such themes were apparent in the overwhelming majority of informants' transcripts in the second round of interviews, where more direct questions on collective goals were asked. There was also little data pointing towards collective goals across teams in AEROS. Moreover, as shown in table 7.3, the majority of informants in AEROS have mentioned that there is collective action inside their teams but not across teams in this division – these themes were found in the vast majority of transcripts from the second round of interviews, where more direct questions on collective action were asked. As well, there were little signs of a lack of collective action inside teams in AEROS and of a presence of collective action across teams in this division. In parallel, as indicated in table 7.3, the majority of informants from AEROS have expressed feelings of resilient trust towards their teammates (but there were also a notable number of informants in this division, who have expressed feelings of fragile trust towards their teammates). However, while most informants in AEROS have expressed feelings of trust (either resilient or fragile) towards most of their team members, there were fewer informants who have shown signs of trust towards employees across teams in this division. Therefore, it could be argued that aspects of social capital (associability and trust) seem to be mostly apparent inside teams in AEROS, but there was little evidence supporting the presence of these aspects of social capital across teams throughout this division (Leana and Van Buren, 1999; Nahapiet and Ghoshal, 1998; Putnam, 1993).

7.4.3. AEROS's organizational capital

Organizational capital is defined as the knowledge that a firm stores in its procedures, structures, systems, routines, databases, patents and/or manuals (Hall, 1992; Keenan and Aggestam, 2001; Subramaniam and Youndt, 2005; Swart and Kinnie, 2007; Walsh and Ungson, 1991; Youndt et al., 2004). The interviews with senior management have pointed that a large portion of AEROS's knowledge and expertise is stored in procedures, databases and manuals inside this division. Senior management has indicated that AEROS procedures, databases and manuals encompass codified knowledge and expertise that are often gathered from previous projects, from current and updated industry regulations and/or from scientific tests conducted in this division. AEROS's procedures, databases and manuals were commonly described by senior management as being elaborate, highly reliable, systematic and well-established in this division. These features of organizational capital in AEROS were explained by senior management as a prominent requirement to the type of complex aerospace designs conducted in this division (which are largely based on a no-error policy and are almost always bounded by strict safety regulations). The types of knowledge and expertise that are stored in AEROS aspects of organizational capital were as well, examined in the second round of interviews. All of the 8 informants in this interview phase have mentioned that AEROS's procedures, databases and manuals contain detailed and extensive information that is directly related to specific elements of their aerospace product designs (such as proofs and tests from previous projects, design methods, specifications, regulations, scientific equations etc.). In sum, the data leads to argue that there seems to be a strong organizational capital in existence inside the AEROS division (Subramaniam and Youndt, 2005; Youndt et al., 2004).

In presenting the characteristics of human capital, subsections 7.3.1 and 7.4.1 have provided insights on the main features of employees inside the SAND and AEROS divisions. To provide more information on the characteristics of SAND and AEROS informants, the following section recalls some data pertinent to the education and experience of informants in these divisions, and provides insights on their job positions.

7.5. Main characteristics of SAND and AEROS informants: education, experience and job positions

The education level, experience and job positions of informants in SAND and AEROS are presented in the following two subsections.

7.5.1. Main characteristics of SAND's informants: education, experience and job positions

While employees are placed in different positions inside SAND, this thesis has chosen to study workers in positions of key responsibility within this division (formal responsibility over key factors inside project teams and/or the division). As indicated in chapter 6, 68 informants in such positions have agreed to participate in this thesis. As presented in table 6.4, 5 of these informants have a technical diploma, 30 hold a bachelor in science or engineering, 24 possess a master in science or engineering, or, an MBA, and 9 are equipped with a PhD (in a scientific area); all of the latter are highest achieved degrees. As well, as illustrated in table 6.4, these informants have many years of work experience. These experiences are mostly in information technology domains and were generally gathered from working in HITEC and/or in well-recognized organizations (or government entities). In relation to the positions occupied by SAND's informants, 12 informants were project managers, 13 were project engineers, 25 were senior engineers, 3 were program managers, 2 were program engineers, 3 were business development managers, 2 were operations managers, 3 were test managers and 5 were senior business analysts.

Before describing the positions occupied by SAND's informants, it is helpful to provide a bit more insights on the hierarchical levels inside SAND. The levels up the hierarchy in this division are divided according to the following ladder: ENG1, ENG2, ENG3 and ENG4 (where ENG1 is the lowest level up the hierarchy and ENG4 is the highest level below the division director). Within these levels there are different positions that could be held by employees in SAND. The interviews with senior management indicate that the positions of formal responsibility over key factors in SAND are commonly positioned at ENG3 and ENG4 levels. In particular, the positions at the ENG3 level encompass the following formal titles: senior engineer, test manager and senior business analyst. As for the positions at ENG4

level they include the subsequent formal titles: program manager, program engineer, operations manager and business development manager. The positions project manager and project engineer could be held by employees at either ENG3 or ENG4 levels. The key responsibilities for each of the listed positions are summarized in the following table. It is worth mentioning that aside from the responsibilities listed in this table, each worker occupying these positions is also responsible for the implementation of human resource management policies in practice inside SAND (such as: employee selection, performance appraisal, training and career opportunities).

Positions of formal responsibility over key factors	Main responsibilities
<i>Operations manager</i>	<ul style="list-style-type: none"> -Determines the budget to be allocated to a number of upcoming projects in a particular program, and follows up on these budgets. -Determines the schedule of a number of upcoming projects in a particular program and follows up on these schedules during the life of these projects.
<i>Business development manager</i>	<ul style="list-style-type: none"> -Responsible for bringing in new business to a particular program: pursuing customers for new business, submitting proposals to customers, and monitoring the market to identify possible new lines of business areas.
<i>Senior business analyst</i>	<ul style="list-style-type: none"> -Analyzes the current and future areas of business for the program and provides key recommendations for the business development manager in his/her pursuit of new business.
<i>Program engineer</i>	<ul style="list-style-type: none"> -Ensures that all resources needed in a particular program are present and identifies future resources that need to be acquired (based on the technical requirements of the program).
<i>Program manager</i>	<ul style="list-style-type: none"> -Coordinates the activities between the program engineer, the operations managers and the business development managers in order to ensure the proper functioning of a particular program.
<i>Project manager</i>	<ul style="list-style-type: none"> -Responsible for building the project team (with the project engineer). -Responsible for the operational management of the project team: budget, schedule, managing change and resources (is the key liaison with the customer in relation to the operational side of the project).
<i>Project engineer</i>	<ul style="list-style-type: none"> -Responsible for building the project team (with the project manager). -Responsible for the technical management of the project team: over viewing all technical activities in the project and making sure that the technical requirements meet the customer demands (is the key liaison with the customer in relation to the technical aspects of the project).

Positions of formal responsibility over key factors (continued)	Main responsibilities
<i>Senior engineer</i>	-Responsible for the technical aspects of a specific area inside the team.
<i>Test manager</i>	-Responsible for performing quality control tests over particular technical systems in the team.

Table 7.4: Positions of formal responsibility over key factors in SAND and AEROS.

As indicated earlier, SAND has a team-based structure where work is divided amid programs and each program includes several projects. Accordingly, the positions of key responsibility are distributed inside teams within this division. Each program in SAND has a central team that generally encompasses a program manager, a program engineer, a number of business development managers, a number of operations managers and a number of senior business analysts. The main role of this central team is to organize the functioning of the entire program, to help building the different teams inside the program, to coordinate activities between projects and to bring in new business for the program; this team has no formal authority over individual projects inside the program. Aside from this central team, each program encompasses a number of teams dedicated to particular projects. The people who generally hold the positions of formal responsibility over key factors in these teams are commonly in the following positions: project manager, project engineer, test manager and senior engineer. It is worth mentioning that while each position has specific responsibilities and workers report information to each other between positions, a person's supervisor is always positioned at a higher ENG level; all workers at ENG4 level have the division director as their supervisor.

7.5.2. Main characteristics of AEROS's informants: education, experience and job positions

Whereas workers are placed in different positions inside AEROS, this thesis is interested in studying employees in positions of key responsibility inside this division (formal responsibility over key factors inside project teams and/or the division). As mentioned in chapter 6, 38 informants in such positions have agreed to participate in this thesis. As illustrated in table 6.4, 15 of AEROS's informants hold a bachelor in science or engineering degree, another 19 have a master in science or

engineering, or an MBA, and 4 other informants are holders of a PhD degree (in science or engineering); all of the latter are highest achieved degrees. Moreover, as presented in table 6.4, all of these informants have many years of working experience, and this experience is commonly related to the specific aerospace segment in which this division operates; informants in AEROS acquired this experience from HITEC and/or by working in global and highly renowned organizations (or government entities) in AEROS's particular type of industry. In relation to the positions occupied by AEROS's informants, 5 informants were project managers, 5 were project engineers, 17 were senior engineers, 1 was a program manager, 1 was a program engineer, 2 were business development managers, 5 were test managers, 1 was a senior business analyst and 1 was an operations manager.

The formal responsibilities of these positions are similar to the SAND division and are also summarized in table 7.4. It is worth indicating as well, that aside from the responsibilities listed in this table, each employee in these positions is also responsible for the implementation of human resource management policies in practice inside AEROS (such as: employee selection, performance appraisal, training and career opportunities). Moreover, AEROS has the same ENG levels as SAND within its hierarchy, and these positions are distributed amid the ENG levels in AEROS in the same manner as in SAND (see description provided in the previous subsection). AEROS also has a team-based structure where jobs are divided amid programs and each program includes a number of projects. Similar to SAND, the positions of responsibility over key aspects are distributed inside teams within the division. For every program in AEROS, there is a central team that commonly includes a program manager, a program engineer, a number of business development managers, a number of operations managers and a number of senior business analysts. The main tasks of this central team are to organize the budget of the entire program, to assist in building the different teams within the program and to bring in new business to the program; this team has no formal authority over individual projects inside the program. In addition to this central team, every program has a number of teams operating on a particular project. The employees that often hold the positions of formal responsibility over key factors in these teams are normally in the following positions: project manager, project engineer, test manager and senior engineer. Again, similar to SAND, whereas each position has specific

responsibilities and employees report information to each other between positions, a worker's supervisor is always placed at a higher ENG level; all employees at ENG4 level have the AEROS division director as their supervisor.

Subsequent to presenting some main characteristics from SAND and AEROS, and after providing insights on the features of employees in these two divisions, the next section elaborates on human resource management inside the two studied cases.

7.6. Human resource policies and practices inside SAND and AEROS

One of the most important assets that HITEC holds is its people. This was apparent in a written statement included within the strategic mission bulletin of the organization. This statement labelled 'dependence on personnel', mainly states that HITEC largely relies on the capabilities, experience and knowledge of its workforce. The statement adds that retaining key employees is amongst the company's most central objectives as the loss of key personnel could have an adverse influence on the performance of the organization. The importance of HITEC's workforce was also highlighted in the senior management interviews. Upper management has indicated that attracting and selecting the best talents and expertise, developing the workforce's learning and capabilities, and retaining employees' knowledge within the company's boundaries, are amongst HITEC's most prominent goals. In accordance with that, senior management has stated that the efficient design and successful implementation of HR policies is one of HITEC's top purposes. Such objectives resonate with previous literature that highlights the significance of human resource management within knowledge based organizations (Alvesson, 2004; May et al., 2002). Senior management has pointed that SAND and AEROS are subject to the very same HR policies. These are policies on selection, training, compensation, performance appraisal, career opportunities, work-life balance, job autonomy, job security and communication.

Before elaborating on the HR policies and practices in SAND and AEROS, it is important to introduce the key members that are responsible for human resource management in these divisions – insights on this were provided during the senior

management interviews. There is a central HR department for both SAND and AEROS. This department employs around 15 Human Resource Officers, 3 HR Executives and, is headed by a Chief HR executive who reports directly to HITEC's Corporate Human Capital Manager. The HR department is generally not involved in key decisions pertinent to the design and implementation of HR policies inside SAND and AEROS. While this department has the responsibility of conducting the first interview for shortlisted candidates in SAND and AEROS (more on that in the selection sub-section), the main role of this department is to provide administrative support in the design and implementation of HR policies in both SAND and AEROS. The central decisions related to the design and execution of HR policies in SAND and AEROS were therefore, taken by HITEC's senior management and employees inside these two divisions. It is important to clarify that the workers that are generally involved in the design and implementation of HRM in SAND and AEROS are positioned at ENG3 and ENG4 levels. Accordingly, throughout the description of HR policies and practices in the subsequent paragraphs of this section, when 'employees, workers or members' of SAND and AEROS are said to have assisted in the design of HR policies or the implementation of HR practices, these workers are generally at ENG3 and ENG4 levels and normally occupy one of the following positions: project manager, project engineer, senior engineer, program manager, program engineer, operations manager, test manager and business development manager.

With the exception of the compensation and job security policy, workers from SAND and AEROS were heavily involved in the design and implementation of HR policies directed towards these two groups. Senior management strategy to devolve a large portion of human resource management to employees in these two divisions seems to be mainly based on the belief that these workers are in closer contact with work and other employees, which puts them in a good position to make key decisions on how HR policies should be designed and enacted inside SAND and AEROS. As indicated however, while employees from SAND and AEROS were heavily involved in HRM, the key decisions related to the design and implementation of the compensation and job security policies were undertaken by HITEC's senior management. For senior management the main expenses within SAND and AEROS are related to the compensation provided to the workforce and to

the costs that could result from redundancy. Therefore, compensation and job security could play an important role in the overall revenues of these divisions. At the same time, senior management believes that remuneration and job security could have an important impact on the retention of the workforce, which as indicated is HITEC's most prominent asset. Accordingly, senior management claims that the compensation and job security policies should be designed and adapted inside SAND and AEROS, in a manner that retains the workforce while enabling HITEC's divisions to meet their profit targets. Upper management believes that they are the group that is the best positioned inside HITEC to make decisions related to this critical balance between retaining the workforce and meeting the company financial targets. Mainly, this is because senior management feels that such a task requires people who have direct control over the company's overall budget and costs and, that have access to overall views from the workforce (which were gathered through employee surveys performed on the entire workforce on a yearly basis; and where employees are given the option of including their names or filling-up an anonymous questionnaire).

After introducing the main members that are responsible for human resource management in SAND and AEROS, details on HR policies and the implementation of these policies in practices are presented in the following subsections. These details were gathered from senior management interviews as well as documents pertinent to human resource policies that were offered to the researcher by upper management. It is important to mention that, in the next subsections, while it is stated that 'workers' are responsible for the implementation of the selection, performance appraisal and career opportunities policies (inside both SAND and AEROS), senior management has mentioned that the directors of SAND and AEROS get also involved in the execution of these policies (inside their respective divisions) for workers (or candidates in the case of selection) they directly supervise (i.e. employees at ENG 4 level or in the case of selection for candidates applying to an ENG 4 position) – this is not mentioned in the subsequent paragraphs for the sake of avoiding repetitions.

7.6.1. Selection

The AEROS and SAND divisions are subject to the same selection policy. Senior management had set the key objective of this policy, which predominantly states that

these divisions should attempt to select the best knowledge, capabilities and qualities available on the market. Based on this aim, the main content of this policy was designed by workers from SAND and AEROS. The selection policy process primarily indicates that the received resumes for a particular position should firstly be screened by the HR department in order to pick the candidates that fit the minimum requirements of the position (in terms of education and/or experience). The chosen curriculum vitas should then be transferred to employees inside SAND and AEROS (that are members of the team and/or program that will hire the candidate), where they should be extensively screened in order to pick out the candidates that will be called for the interview process. The candidates that are shortlisted for a particular position should pass through a series of 3 interviews. The first interview should be with a member from the HR department and should involve a presentation of the job requirements and an overview of the work atmosphere in the division. Moreover, the candidate should be asked general questions on his/her background and interests, and should (right after this 1st interview) sit for two written exams: a mathematical reasoning test and a psychological test. All candidates that undergo interview one, should be offered the chance for a second interview. The second interview should be with members from the team and/or program that will hire the candidate – this interview should encompass questions that extensively assess the candidate's skills, knowledge and personality versus the requirements of the applied position. The second round of interviews should filter a number of candidates that seem to possess the appropriate traits, skills and knowledge for the applied job. These filtered candidates should then go through a third interview (with members from the team and/or program that will hire the candidate, but that are different than the ones present in the second interview) that further evaluate the candidate's capabilities and knowledge vis-a-vis the needs of the vacant position. As the third round of interviews is completed for all candidates, a committee (comprising members that interviewed the candidates in all interview rounds) should then assess the results of the three interviews and determine which candidate best fits the requirements of the vacant position. The policy mentions that personality factors (mostly in terms of values and group-candidate fit) should be an integral part of the final selection decision.

The implementation of the selection policy is completed by members from the HR department as well as workers in SAND and AEROS. For candidates applying to either SAND or AEROS, the HR department normally conducts interview one and generally follows the guidelines of the selection policy (including the mathematical reasoning and psychological tests). Subsequently, workers in SAND and AEROS complete the other remaining interviews. Senior management has pointed that, in practice, in their attempt to select the best possible candidates, SAND and AEROS commonly exceed the determined number of interviews stated in the policy – applicants normally go through 3 or 4 interviews with different employees before the meeting that results in the final selection decision is held. While personnel from the HR department are normally present during this meeting, senior management indicates that the final selection decision is normally taken solely by workers in these two divisions. Moreover, upper management has indicated that even though employees in both divisions often go through an extensive screening of candidates' capabilities and knowledge during the interviews (as indicated in the policy), SAND's workers generally emphasize on assessing group-candidate fit and a candidates' values, but such factors are often undermined in AEROS. As well, whereas the personality test results and the assessment of the candidate personality and fit are often stressed in the final selection decision made by SAND employees, these aspects do not generally have a notable role when AEROS workers come up with their end decision. Senior management explained that the reason behind this is that SAND is primarily looking for people with software engineering or information systems expertise, whereas AEROS mainly requires individuals with an extensively specialized aerospace knowledge. As well, AEROS mostly employs candidates who possess several years of work experience, whilst SAND relies on both fresh grads and experienced workers. Consequently, SAND's pool of candidates is 'relatively' more easily found than the rather highly specialized profiles that AEROS is seeking to employ. This generally meant that in the selection practice, SAND is more capable than AEROS to emphasize on personality and group-candidate fit. In fact, upper management stated that AEROS most often has to downplay the personality factor, in order to employ a rare skill that is imperative for a particular job.

7.6.2. Training

SAND and AEROS are subject to the same training policy. This policy was mainly designed by senior management with direct involvement from a number of workers from SAND and AEROS. The policy primarily states that, before every working year, SAND and AEROS must identify and develop a list of courses that cover current and future employee developmental needs. These courses should be offered internally at a predetermined schedule (during working hours) throughout the approaching working year. The courses list must be made public to the entire workforce inside SAND and AEROS, and all workers should have the option of attending any course(s) of interest. Supervisors should make any necessary arrangements in order to enable the employee to attend their chosen courses sessions.

This policy is mainly implemented in practice by workers inside SAND and AEROS. Prior to the start of the working year, program managers and program engineers inside these divisions identify the needed areas of training (these generally encompass current or future training needs in these divisions). Subsequent to that, program engineers from SAND and AEROS normally meet in order to see if there are any overlaps in training needs between programs and amid the two divisions; usually common developmental needs between SAND and AEROS are identified in areas of soft skill training. Once the full list of courses is developed, the program engineers in SAND and AEROS normally send a memo to workers in their divisions, asking for volunteers to design and offer the courses. Senior management has stated that employees inside these two divisions are normally happy to help in these training courses. Workers who choose to assist in the training (from each of SAND and AEROS) are normally responsible for designing and offering their chosen course(s). All courses are offered inside HITEC and during official working hours. Before the start of the working year and, once the courses are identified and developed, they are listed (along with their schedule and the conference room where they will be offered) on a common intranet website for both divisions – which is known by the ‘HITEC University’ website. Employees inside SAND and AEROS could choose any course of interest on the website, and are asked to notify their supervisor of the courses they wish to enlist in. These courses usually cover a wide range of hard skill technical domains in information technology and aerospace.

There are often courses that are also related to areas such as: project management, team building, leadership, conflict resolution, presentation skills etc. (these are usually the courses of common interest for both divisions). The HR department assists in the implementation of the training policy, through administrative assistance in aspects such as: the development of courses packages, updating the 'HITEC University' website and developing the courses' yearly schedules.

7.6.3. Compensation

There is a common compensation policy directed towards the SAND and AEROS divisions. The policy on compensation was designed by senior management with the intention that employees should have a sizable part of their remuneration that is performance-based. For this purpose, compensation was divided into two central components (fixed pay and performance-related pay) and a set of regulations related to each of these elements were developed. The fixed pay element encompasses a monthly salary that is mainly contingent on the employee level of education and relevant experience. Salary brackets corresponding to education and experience levels were created. According to a senior manager these brackets are designed in order to ensure that equitability in salaries can be closely achieved for employees with similar educational and experience backgrounds. The performance-related pay component comprises a 'variable pay' and a 'long-term incentive plan' (LTIP). In relation to the variable pay aspect, the policy indicates that each year, all employees are entitled to an extra pay based on their performance appraisal results for that year. As for the long-term incentive plan, the policy states that workers can be rewarded for their performance by a share of the company's overall profits; that the worker could 'cash out' in 5 years from the date it was granted. The policy indicates that all employees can be entitled for this plan, but the value of this remuneration and whether it should be provided or not, should be based on previous performance appraisal results for each individual worker. Employees who are already part of the plan cannot benefit from an additional remuneration (within this plan) before the 5 years period (from the day it was granted) has elapsed.

The implementation of the compensation policy in practice within SAND and AEROS is mainly attained by senior management with administrative assistance

from the HR department (collecting performance appraisal results, preparing employee databases, ensuring the administrative process of distributing compensations, paper work, data entry etc.). Senior management has indicated that the compensation policy is applied in similar ways inside each of SAND and AEROS. In order to abide by the key feature of the compensation policy, upper management emphasized that employee remuneration inside SAND and AEROS must have a sizeable portion that is based on performance. For this purpose, the value of the fixed salaries (which according to senior management is paid equitably between employees following the brackets stated in the policy) that are offered to workers inside each division was described by senior management as rather low compared to overall industry standards for similar working positions. Senior management relies on the value of the performance-based component of compensation to compensate for the low salaries and to provide workers with an overall compensation that is comparable to similar positions in competing firms. In particular, it is the LTIP that normally has the most prominent value of the performance-related remuneration of employees in both SAND and AEROS. The yearly variable pay aspect in practice does not offer employees more than a 2 or 3% increase in their yearly salary. Senior management wanted to allocate the compensation in this manner, between the variable pay and the LTIP, because they believe that the long-term incentive plan would tie individuals' performance with the organization's revenues and objectives. Upper management claimed that this plan would encourage expert employees to individually perform while maintaining their efforts into helping their peers and their company in reaching organizational targets. Conversely, senior management indicated that if the variable pay represented a notable increase in workers' compensation, then this might run the risk of promoting individual work. Also, the long-term nature of the plan was portrayed by upper management as a good strategy in retaining valuable human resources in SAND and AEROS, as it could help linking personal goals with long-term organizational objectives. It is worth noting that the data from senior management interviews indicate that determining individuals' performance-based remuneration is less based on the formal performance appraisal outcomes (as stated in the policy) and more on insights gathered through informal channels and, on an employee's participation in knowledge development. The following subsection elaborates on the performance appraisal policy and practice in both SAND and AEROS.

7.6.4. Performance appraisal

Senior management with direct involvement from workers from SAND and AEROS has designed a common performance appraisal policy for both divisions. The policy states that, on a yearly basis, an individual's performance should be constructively evaluated following a set of criteria/objectives determined by the employee and her/his supervisor at the start of the evaluated year. At the time of the appraisal, these criteria should be assessed by the employee, her/his supervisor and a third member chosen by the worker. The responsibility to apply this policy inside SAND and AEROS is given to the supervisor of the evaluated employee. Senior management indicated that, in practice, within both divisions, supervisors attempt as much as possible to closely implement the content of this policy. In both divisions, at the start of the year, the supervisor meets with the evaluated employee, and they both set a list of objectives to be evaluated at the end of the working year. At the time of the appraisal, these criteria are then evaluated by the supervisor, the assessed employee and a third member chosen by the evaluated worker. However, upper management stated that even though constructive advice on previous working tasks is generally provided to SAND and AEROS employees during their performance appraisal, many supervisors (within both divisions) encounter certain difficulties in systematically and objectively evaluating all of the predetermined criteria. This is mainly because in SAND, within the assessed year, employees can sometimes shift project teams or can become members of additional teams concurrently with their initial team at the start of the year; which could affect their responsibilities or the nature of their tasks. As for AEROS, these assessment difficulties are generally caused by the nature of aerospace design work. This type of work often meant that employees are operating on tasks which direct outcomes are based on a process that requires a normal period of testing and redesign that could extend beyond the year based on which the employee is being evaluated. This seems to complicate the assessment practice in AEROS especially for employees who possess advanced knowledge and experience that is not easily evaluated by other members, if solid outcomes are not yet provided. Accordingly, in assessing the set criteria in practice, supervisors in SAND and AEROS often rely on the evaluated employee input and comments from the third party member (that was chosen by the evaluated worker), rather than concrete and systematic performance outcomes.

7.6.5. Career opportunities

SAND and AEROS are subject to the same career opportunities policy. The policy on career opportunities was developed by senior management assisted by workers from SAND and AEROS. The policy indicates that all employees inside SAND and AEROS should be provided with internal career opportunities that enhance learning and growth. This should encompass lateral (at the same organizational level) and vertical (promotion) prospects for workers inside these divisions. In relation to promotional opportunities, the policy states that the SAND and AEROS divisions should have a clear promotion ladder for employees. Each division should have 4 levels up the hierarchy, and these levels (as described earlier) were denoted by ENG 1, 2, 3 and 4 (1 being the lowest level and 4 the highest level below the director of the division). The policy indicates that moving up the ENGs should be based on two criteria, assessed by a committee formed from the employee supervisor and two other members (at higher ENG level than the promoted worker) that are chosen by the supervisor and that are approved by the division director. The first criterion is a minimum tenure of 2 years at the current ENG level. The second criterion indicates that, if the employee meets the minimum tenure period, promotion into the next higher ENG level should be based on the employee previous performance appraisal results. With regard to lateral movements, the policy states that as positions at the same ENG level (inside SAND and AEROS) become vacant, utmost priority to fill these positions should be given to interested employees within SAND and AEROS. In addition, the policy states that employees in ENG 1 level (inside SAND and AEROS) should have a formally assigned mentor (who must be at ENG 3 or higher) that assists these workers in finding job opportunities in available positions and areas of interest inside their divisions; there is no mentor for the other levels.

Implementing this policy in practice is completed by workers (mainly, supervisors and/or formal mentors) inside SAND and AEROS, with administrative assistance from the HR department (such as supplying previous performance appraisal results, providing a list of vacant positions inside the division, completing paper work etc.). As indicated, there were clear ENG levels in existence inside SAND and AEROS, and both divisions offered their employees with the opportunity to move up these ENG levels. Senior management pointed that even though SAND

and AEROS seem to abide by the minimum tenure requirement for promotion, in both divisions the formal performance appraisal results are not the sole factor based on which the employee is promoted. In addition to these official results, upper management has indicated that the promoting committees in SAND and AEROS often seem to also rely on their personal informal judgment. In relation to lateral movements, senior management has stated that, SAND and AEROS closely abide by the career opportunities policy, as employees interested in moving into a vacant position at the same level are in practice, generally given priority over external candidates, and supervisors often facilitate these types of worker movements inside SAND and AEROS. As for the ENG 1 level employees, these are all assigned (in SAND and AEROS) a formal mentor (who is at ENG 3 level or above) responsible for assisting the worker in identifying job opportunities within the division.

7.6.6. Work-life Balance

There is a single work-life balance policy that is directed towards both SAND and AEROS. This policy was designed by senior management and workers from these two divisions. The policy is called 'flexible-time' and mainly states that all employees in SAND and AEROS can have a flexibility of 2 hours in coming in or leaving work during a week as long as they have covered the basic required weekly hours of 40. Supervisors should be responsible for ensuring the proper implementation of this policy. In practice however, upper management has mentioned that supervisors do not seem to abide by the terms of this policy. Accordingly, senior management has highlighted that the 'flexible time' policy is not implemented in practice inside SAND and AEROS. Upper management has pointed that employees' working hours are commonly based on their interactions with their team members and their personal time-management efforts.

7.6.7. Job autonomy

Both SAND and AEROS are subject to the same policy regarding job autonomy. The policy was designed by senior management and workers inside SAND and AEROS. The policy mainly indicates that all employees inside SAND and AEROS should be provided with high levels of freedom and autonomy in performing their working tasks. The policy mentions that teams should operate independently with interference from outside members restricted to limited situations (such as exceeding budget

limits or recurrent customer complaints). Furthermore, key personnel inside teams should distribute tasks amongst team members in a manner that enables workers to complete their daily tasks with minimum levels of supervision and control. Senior management indicated that, in practice, the terms of the job autonomy policy are largely implemented by them (senior management) and workers inside both of SAND and AEROS.

7.6.8. Job security

SAND and AEROS are subject to the same job security policy. This policy was created by senior management and it mainly emphasizes that forced redundancies should be highly avoided. The policy states that managers in SAND and AEROS should be made aware of this job security policy and they should be notified that any employee layoff has to be approved by senior management. Upper management have indicated that they largely abided by this policy in practice. This could as well, be noticed in employee layoff rates (within both SAND and AEROS), which as shown by senior management, are markedly lower than industry averages. Senior management have mentioned that what helps them execute this policy is that they have instructed managers in SAND and AEROS to remain slightly understaffed so that in hard times they would not need to lay employees off.

7.6.9. Communication

SAND and AEROS are subject to the same communication policy. This policy was designed by HITEC's senior management with involvement from workers from SAND and AEROS. Its main objective is for senior management to widely share firm-level information and business insights (such as overall firm performance, division performance, new strategies and/or future company objectives, market conditions etc.) with employees in both divisions. This information should be communicated to employees within SAND and AEROS through periodic briefings with the CEO, monthly meetings with heads of divisions and regular intranet briefings. Senior management pointed that, in practice, the CEO briefings, the monthly meetings with the head of the division and the constant intranet briefings are all implemented in SAND and AEROS – and as stated in the policy provided information on company/division performance, strategies, plans etc. Senior management takes part in executing this policy, since the CEO and the heads of the

departments usually chair those meetings and briefings. Employees from SAND and AEROS also help in preparing for these meetings by providing important information (to be used in the communication meetings/briefings) from their teams and programs. The HR department as well, assists senior management in implementing this policy through administrative support (such as helping in organizing the meetings and updating the communication messages on the intranet).

7.6.10. Summary of HR practices inside SAND and AEROS

After elaborating on the HR policies and practices that are present inside SAND and AEROS, the following table summarizes the main features of the HR practices that are in existence inside these two divisions. As it is described earlier and in the table hereunder, these two divisions appear to be subject to the same HR practices, with the exception of a difference related to employee selection. SAND seems to emphasize on personality and group-candidate fit features in interviews and selection decisions. Conversely, personality and group-candidate fit aspects are often undermined when selecting candidates inside AEROS.

HR practice	Description	Difference between SAND and AEROS
<i>Compensation</i>	<p>-All employees are offered a fixed salary that is commonly lower than industry standards – where employees with close education and experience backgrounds are generally positioned in similar salary brackets.</p> <p>- A long-term incentive plan is offered to all employees depending on their performance. The plan rewards employee performance (not just evaluated based on formal performance appraisal results but also on insights gathered through informal channels and on an individual's participation in knowledge development) with a part of the company's overall profits; after 5 years from the day it was granted. This plan often compensates for the low salaries by providing workers with an overall compensation that is comparable to similar positions in competing firms.</p> <p>-All employees are entitled to a variable pay component offered on a yearly basis and that is dependent on employee performance (not just evaluated based on formal performance appraisal results but also on insights gathered through informal channels) – the extra pay often does not exceed 2 or 3% of overall salary.</p>	No notable differences in the compensation practice between SAND and AEROS.
<i>Performance appraisal</i>	<p>There is a yearly performance appraisal:</p> <p>-At the start of the year, the employee and her/his supervisor set a list of objectives to be evaluated by the end of the year.</p> <p>-At the time of the appraisal these objectives are assessed by the supervisor, the evaluated employee and a third member chosen by the assessed worker.</p> <p>-Constructive advice is often provided during the appraisal.</p> <p>-Supervisors commonly find it difficult to systematically and objectively evaluate all of the predetermined objectives; they generally rely more on the evaluated employee and a third party member inputs rather than concrete and systematic performance outcomes.</p>	No notable differences in the performance appraisal practice between SAND and AEROS.

HR practice (continued)	Description	Difference between SAND and AEROS
<i>Training</i>	<p>There are yearly training courses covering current and future employee developmental needs:</p> <ul style="list-style-type: none"> - Before the start of the working year a list of courses (along with their schedule and the conference room where they will be offered) is posted on a common intranet website for both divisions – the ‘HITEC University’ website. - Any employee inside SAND and AEROS could choose any course(s) of interest on the website. - All courses are developed internally and offered during working hours. -All courses are designed and offered by workers from SAND and AEROS. -Courses cover a wide range of hard skill technical domains in information technology and aerospace. As well, courses cover areas such as project management, team building, leadership, conflict resolution and presentation skills. 	No notable differences in the training practice between SAND and AEROS.
<i>Career opportunities</i>	<ul style="list-style-type: none"> -There are clear organizational levels (denoted by ENG levels) up the hierarchy and all employees are given the opportunity to move up these organizational levels based on a minimum tenure of 2 years in current level and performance evaluation (that is not solely based on formal performance appraisal results but also on informal judgments). -The decision for promotion is taken by a committee formed by the employee supervisor and approved by the director of the division. -All employees interested in moving into a vacant position at the same level were given priority over external candidates, and managers seem to facilitate these types of lateral worker movements. -Employees at ENG 1 level were all assigned a formal mentor responsible for assisting the worker in identifying job opportunities within the division. 	No notable differences in the career opportunities practice between SAND and AEROS.

HR practice (continued)	Description	Difference between SAND and AEROS
<i>Job autonomy</i>	<p>-Working teams operate independently with interference from outside members generally restricted to limited situations (such as exceeding budget limits or recurrent customer complaints).</p> <p>-Employees inside teams usually complete their daily tasks with minimum levels of supervision and control.</p>	No notable differences in the job autonomy practice between SAND and AEROS.
<i>Communication</i>	-Firm level information and business insights (such as firm performance, division performance, new strategies and/or future company objectives, market conditions etc.) are communicated to all employees through periodic briefings with the CEO, monthly meetings with heads of divisions and constant intranet briefings.	No notable differences in the communication practice between SAND and AEROS.
<i>Job security</i>	-Forced redundancies are highly avoided in practice.	No notable differences in the job security practice between SAND and AEROS.
<i>Selection</i>	<p>-Shortlisted candidates go through a first interview with a member from the HR department, and right after this interview candidates normally sit for two written tests: mathematical reasoning and psychological.</p> <p>-Then all candidates from interview one usually enter a process where they are filtered through 3 or 4 interviews with different members who are in the team/program responsible for the vacant position. Candidates are extensively filtered based on capabilities and knowledge. In SAND, these interviews also account for the candidate personality and group-candidate fit, but this was often not done in AEROS.</p> <p>-Then a meeting (comprising members who interviewed the candidate) will make the final decision – personality is often emphasized along with knowledge and capabilities in SAND. In AEROS, decisions were often largely based on the candidate's knowledge and abilities.</p>	<p>-SAND often encompasses personality and group-candidate fit features in interviews and selection decisions.</p> <p>-Conversely, in AEROS, personality and group-candidate fit aspects are often undermined in interviews and selection decisions.</p>

Table 7.5: Summary of the HR practices present inside SAND and AEROS.

In comparison with the literature on 'high commitment' human resource practices it appears that the HR practices that are present inside SAND and AEROS conform fairly well to HR practices that are defined by 'high commitment' scholars. In particular, within SAND and AEROS, there is a sizeable portion of employee remuneration that is performance-based, which closely compares to compensation practices that were categorized by authors as 'high commitment' (Appelbaum et al., 2000; Guest, 1999; Guthrie, 2001; Huselid, 1995; Snell and Dean, 1992; Wright et al., 2003). In connection with the performance appraisal practice in SAND and AEROS, this also has the characteristics of a 'high commitment' HR practice. This is because the practice of conducting a yearly performance appraisal that constructively evaluates workers' performance was delineated by previous research as a 'high commitment' HR practice (Huselid, 1995; Snell and Dean, 1992; Truss, 2001; Whitener, 2001; Wright et al., 2003). As well, based on earlier studies, the training practice in SAND and AEROS can be viewed as a 'high commitment' HR practice. Previous studies have indicated that the implementation of formal training courses that aim at developing employees' current and future knowledge needs form a 'high commitment' HR practice (Huselid, 1995; Snell and Dean, 1992; Truss, 2001; Wright et al., 2003). Moreover, the career opportunities practice in both SAND and AEROS has similar characteristics with the career opportunities practice in 'high commitment' HR studies (Guthrie, 2001). Mainly, the literature indicates that opportunities for promotion that are based on performance and, giving priority to employees to fill in vacant internal positions (before hiring someone from the external market) are seen as a 'high commitment' HR practice (Guest, 1999; Guthrie, 2001; Huselid, 1995). Furthermore, the job autonomy practice directed towards employees in SAND and AEROS is described in the literature as a 'high commitment' HR practice (Boselie et al., 2005; Guest et al., 2004). Similarly, the communication practice that is present in SAND and AEROS, and that aims at keeping the workforce informed about the firm plans and performance has also been described in previous studies as a 'high commitment' HR practice (Guest, 1999; Guthrie, 2001; Huselid, 1995). Moreover, the practice of job security inside SAND and AEROS, which keeps away from compulsory redundancies, is a practice that was often defined in the literature as a 'high commitment' HR practice (Becker and Huselid, 1998; Guest, 1999). The selection practices in both SAND and AEROS,

which seem to focus on high selectivity in hiring, can also be closely compared with ‘high commitment’ selection practices (Huselid, 1995; Wright et al., 2003).

7.7. Conclusion

This chapter has presented key insights that can assist in addressing this thesis main objective and that will be subsequently used in the following analytical chapters. In particular, this chapter has described the main features of the SAND and AEROS divisions (including the central characteristics of human, social and organizational capital within SAND and AEROS) as well as the key characteristics of knowledge workers inside these divisions. Moreover, this chapter has presented the formal HR policies and the HR practices in existence inside the two studied cases.

After providing the main characteristics of knowledge workers and HR practices (inside SAND and AEROS) in this chapter, the next chapter will investigate, within both cases, the linkages between knowledge workers’ perception of HR practices and, their organizational commitment and job satisfaction.

CHAPTER 8

Within-case analysis: the interconnections between perception of HR practices and knowledge workers' organizational commitment and job satisfaction

8.1. Introduction

This chapter presents the within-case findings related to the impact of informants' perception of HR practices on their organizational commitment and job satisfaction – for each of the SAND and AEROS cases. The analysis in this chapter is primarily based on the first round of interviews with informants from the two divisions. Key codes used in the analysis are defined in tables throughout the presentation of results in this chapter. These codes mostly represent themes, patterns or relationships between theoretical concepts. As the main conclusions in this chapter were obtained using tables that include the frequency of various codes, tables encompassing the frequency of the main codes used in the analysis are also presented throughout this chapter. Frequencies of codes were obtained based on summary tables constructed after allocating different codes to corresponding verbatim statements (within each of the cases data records). At first, tables were developed and displayed as 'informant-by-code' tables, in order to assist the research in analyzing the views provided by various informants (Miles and Huberman, 1994). Then in order to further summarize the data and to assist the researcher in making conclusions, the 'informant-by-code' tables were used to determine the frequency of each code (i.e. for each code: the number of informants who have this code present in their interview transcript against the overall number of informants).

In this chapter, the results related to each HR practice that is in existence in the studied cases, are presented according to the following key themes: informants' perception of the HR practice, the interconnection between informants' perception of the HR practice and their organizational commitment, and the interconnection between informants' perception of the HR practice and their job satisfaction. Section 8.2 in this chapter provides the results pertinent to the interconnections between SAND informants' perception of HR practices and, their organizational commitment and job satisfaction. Subsequently, section 8.3 presents the findings related to the

interconnections between AEROS informants' perception of HR practices and, their organizational commitment and job satisfaction.

8.2. Relationship between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction: SAND

For each of the HR practices that are present inside the SAND division, the following subsections will present findings related to SAND's informants' perception of this practice and mainly, how such perception can impact their organizational commitment and job satisfaction.

8.2.1. Compensation

Before presenting the findings pertinent to the interconnections between SAND's informants' perception of compensation and, their organizational commitment and job satisfaction, it is perhaps helpful to firstly shed some light on these informants' perception of this practice inside their division.

8.2.1.1. Knowledge workers' perception of compensation in SAND

Almost every informant in SAND has pointed out that her/his compensation consists of three main components: the fixed salary, the variable pay and the long-term incentive plan. Chapter 7 elaborated on the actual presence of these components of compensation within the SAND group. The overwhelming majority of SAND's informants have stated that they view that their fixed salary is rather low in comparison with overall industry standards. As for the variable pay, this was commonly described as being more of a symbolic gesture (that does not exceed 2 or 3% of the overall salary) rather than any real monetary compensation. The general trend in the data points that it is the value of the long-term plan component that is most favourably looked upon by SAND's informants. These informants have commonly indicated that they often contrast their pay with that of the external job market and that the long-term incentive plan compensates for their low salaries, by making their overall compensation fairly close to the remuneration benchmarks of similar workers within their industry. Nonetheless, while the long-term plan appears to have helped in narrowing the differences between SAND's informants'

compensation and the market pay standards, the data shows that almost all informants inside SAND seem to perceive that their overall compensation is not competitive in comparison with what they could earn elsewhere (i.e. they feel that they could make notably more money in other firms). In describing their perception of compensation, informants inside this division have commonly explained that the level of knowledge and expertise that they hold is valuable and/or is in high demand in the industry, which often enables them to obtain superior remunerations in other firms within the industry. Such perception of compensation in SAND falls in line with scholars' claims, indicating that knowledge workers are highly directed towards the external employment market (May et al., 2002; Reed, 1996). The literature mentions that knowledge workers realize that they possess a level of knowledge that is often valuable and rare, which gives them a sense of ownership over what they should earn in return for their services (Barney, 1991; May et al., 2002; Purcell et al., 2009; Reed, 1996).

8.2.1.2. Perception of compensation and knowledge workers' organizational commitment in SAND

The following table presents a list of key codes used in the analysis of the interconnection between SAND's informants' perception of compensation and their organizational commitment.

Code	Definition
<i>Link between perception of compensation and organizational commitment</i>	Describes a connection between perception of compensation practice and organizational commitment ¹ .
<i>Perception of LTIP as making overall compensation comparable to industry standards helps in making worker wanting to remain in the organization</i>	Describes that perception of LTIP as making overall compensation comparable to the market remuneration standards helps in making the worker wanting to remain employed in the organization.
<i>Perception of overall compensation as notably lower than industry standards could make worker think of leaving organization</i>	Describes that if worker perceives that overall compensation is notably lower than industry standards then this could make her/him think of changing company.

¹ Organizational commitment in the key codes presented in this chapter is defined based Gould-Williams (2003).

Code (continued)	Definition
<i>Perception of compensation as being notably lower than market could make worker think of changing firms, as such perception could project that organization does not value the worker</i>	Explains that if worker perceives that overall compensation is notably lower than market standards, then this could make her/him think of changing firms, since such perception could project that organization does not value the worker.
<i>Perception of compensation as being non-competitive in comparison with industry reduces organizational commitment</i>	Describes that perception of compensation as being non-competitive (not offering rather superior compensation in comparison with the market) reduces organizational commitment.
<i>Not seeking for additional pay in comparison with the industry</i>	Describes worker as not seeking for additional pay in comparison with industry.
<i>Looking for aspects of the job in the firm more than competitive pay in comparison with industry</i>	Describes worker as looking for aspects of the job in her/his organization more than competitive pay in comparison with industry.
<i>Looking for features of co-worker relations in firm more than competitive pay in comparison with industry</i>	Describes worker as looking for strong features of co-worker relations in her/his firm (such as cooperation, interaction and trust) more than competitive pay in comparison with industry.

Table 8.1: Key codes used in the analysis of the linkages between informants' perception of compensation and their organizational commitment.

After defining key codes used in the analysis of the interconnection between perception of compensation and organizational commitment in SAND, the subsequent table presents the frequency found for each of these codes (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Link between perception of compensation and organizational commitment</i>	65/68
<i>Perception of LTIP as making overall compensation comparable to industry standards helps in making worker wanting to remain in the organization</i>	58/68
<i>Perception of overall compensation as notably lower than industry standards could make worker think of leaving organization</i>	52/68
<i>Perception of compensation as being notably lower than market could make worker think of changing firms, as such perception could project that organization does not value the worker</i>	43/68

Code (continued)	Frequency
<i>Perception of compensation as being non-competitive in comparison with industry reduces organizational commitment</i>	4/68
<i>Not seeking for additional pay in comparison with the industry</i>	46/68
<i>Looking for aspects of the job in the firm more than competitive pay in comparison with industry</i>	37/68
<i>Looking for features of co-worker relations in firm more than competitive pay in comparison with industry</i>	42/68

Table 8.2: Frequencies of key codes used in the analysis of the linkages between SAND informants' perception of compensation and their organizational commitment.

The findings on the link between SAND informants' perception of compensation and their organizational commitment are mainly based on table 8.2. The examination of the data indicates that perception of compensation can impact the organizational commitment of informants in SAND. In particular, perception of the long-term incentive plan, as enabling overall compensation (i.e. fixed pay, variable pay and LTIP) to be close to industry remuneration standards, seems to have helped in making the majority of SAND's informants wanting to remain employed within their organization. Most informants in this division have as well, emphasized that if they perceive that their overall compensation is notably lower than industry standards then this could encourage them to change employer. The following quote gives an example of a verbatim statement (from a SAND informant) related to the linkages between perception of compensation and organizational commitment (this quote was allocated the code: 'Perception of LTIP as making overall compensation comparable to industry standards helps in making worker wanting to remain in the organization'):

'As long as [the long-term plan] is around I would stay with the company, you know if it disappears there is just too much of a difference between here and elsewhere' (Knowledge worker SAND 1, age 40 to less than 50, BEng, 20 or more years of work experience).

Common themes from this division's informants appear to explain the connection between their perception of compensation and their organizational commitment. These common themes point that if informants perceive that their overall compensation is markedly lower than market standards, then they might think of

changing firms, since this could make them feel that they are not valued by their organization. The subsequent quote is an example of a verbatim statement from a SAND informant explaining the connection between perception of compensation and organizational commitment (this quote was assigned the code: 'Perception of compensation as being notably lower than market could make worker think of changing firms, as such perception could project that organization does not value the worker'):

'I've got friends in the industry and we sometimes talk about these things...[and] I feel I am slightly underpaid and let's say that I'm ok with that but well, if this ever becomes significant, well then yes I would seriously consider leaving because this would clearly show that I am not valued here'(Knowledge worker SAND 2, age 40 to less than 50, MSc, 20 or more years of work experience).

The connection found between SAND's informants' perception of compensation and their organizational commitment falls in line with previous studies describing that pay could affect the attitudes of knowledge workers (Baron and Hannan, 2002; Horwitz et al., 2003). Furthermore, the results that appear to explain this interconnection seem to resonate with scholars' claims that knowledge workers are generally highly directed towards the external job market (May et al., 2002; Reed, 1996), and that they often recognize the value of the knowledge and abilities they possess (Barney, 1991; May et al., 2002; Reed, 1996).

Interestingly, while notable negative differences in overall compensation between the organization and the industry standards are likely to decrease SAND's informants' organizational commitment, there are few indications in the data suggesting that perception of compensation, as being non-competitive (i.e. not offering notable additional compensation in comparison with other companies within the industry), can reduce the organizational commitment of this division's informants. This perhaps could be explained by common themes pointing that SAND's informants do not generally seek additional pay in comparison with other companies. Particularly, many informants have explained that they search for aspects of the job and co-workers relations in their employing organization, more than additional economic rewards. Such findings resonate with earlier work on knowledge workers, which illustrates that these employees are usually highly paid, but more money is not what they generally seek – rather they are more interested in

features of their job and their social relationships at work (Alvesson, 1993; Horwitz et al., 2003; Thomson and Heron, 2002).

8.2.1.3. *Perception of compensation and knowledge workers' job satisfaction in SAND*

The subsequent table presents the definition of key codes used in the analysis related to the connection between perception of compensation and job satisfaction in SAND.

Code	Definition
<i>Perception of compensation does not impact job satisfaction</i>	Describes lack of a connection between perception of compensation practice and job satisfaction ² .
<i>Monetary compensation key aspiration in job</i>	Describes worker seeing monetary compensation as an important aspiration in her/his job.

Table 8.3: Key codes used in the analysis of the linkages between perception of compensation and job satisfaction.

Subsequent to defining key codes used in the analysis of the interconnection between perception of compensation and job satisfaction in SAND, the following table presents the frequency that exists for each of these codes (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Perception of compensation does not impact job satisfaction</i>	63/68
<i>Monetary compensation key aspiration in job</i>	2/68

Table 8.4: Frequency of key codes used in the analysis of the linkages between perception of compensation and job satisfaction, in SAND.

² Job satisfaction in codes defined in this chapter is delineated based on Hackman and Oldham's (1975).

The results on the link between perception of compensation and job satisfaction in SAND are mainly based on table 8.4. The overwhelming majority of informants in SAND have indicated that their views of the compensation practice are not related to their job satisfaction. The following quote is an example of a verbatim statement (from an informant in SAND) pertinent to the linkage between perception of compensation and job satisfaction (this quote was allocated the code: 'Perception of compensation does not impact job satisfaction'):

'No it's not the pay [that affects my job satisfaction] its more being part of a company that I respect, the kind of work that we do and [the] people that we work with, smart people, high integrity and interest in the work my own work, I find that interesting' (Knowledge worker SAND 3, age more than 30 to less than 40, MBA, 10 to less than 15 years of work experience).

In previous studies on job satisfaction, scholars posit that this variable is likely to be affected by the main factors that employees aspire for in their jobs (Clark, 1996; Locke, 1976). However, there were little signs in the data pointing towards compensation as being a key factor that SAND informants aspire for in their work. This is perhaps why this construct does not seem to influence the job satisfaction of informants in this division.

8.2.2. Performance Appraisal

Before presenting the findings related to the connection between SAND's informants' perception of performance appraisal and, their organizational commitment and job satisfaction, it is helpful to firstly illustrate these informants' perception of the performance appraisal practice that is present inside their division.

8.2.2.1. Knowledge workers' perception of performance appraisal in SAND

The majority of SAND's informants have mentioned that the outcomes of their formal yearly performance appraisal are often seen, by themselves and by most co-workers, as being rather subjective. The general trend in the data points that the subjective feature of the performance appraisal practice is normally related to the structure of work and teams in SAND – where employees' tasks and team

memberships could frequently change during the assessed working year, which could affect the criteria upon which employees are being evaluated. Interestingly however, while the majority of informants in SAND have stated that their performance appraisal is often seen as being subjective, the data indicates that there is less than 20% dissatisfaction with this practice amongst informants in this division. This is perhaps because SAND informants have commonly acknowledged that it is fairly difficult to increase the objectivity of formal performance appraisal outcomes for people operating within their type of organizational structure.

8.2.2.2. *Knowledge workers' perception of performance appraisal and organizational commitment in SAND*

The next table provides the definition of main codes used in the analysis pertinent to the connection between SAND informants' perception of performance appraisal practice and their organizational commitment.

Code	Definition
<i>Link between perception of performance appraisal and organizational commitment</i>	Describes a connection between perception of performance appraisal practice and organizational commitment.
<i>Acknowledging that, within division team structure, it is difficult to get objective and/or accurate assessment of performance through performance appraisal practice</i>	Describes worker as acknowledging that, with current team-based structure, it is difficult to objectively and/or accurately assess a worker's performance through formal performance appraisal practices.
<i>No reliance on performance appraisal outcomes to see how performance is being evaluated but depends on informal talks</i>	Describes that worker does not rely on results of performance appraisal practice to see how her/his performance is being evaluated, but depends on informal talks with supervisors and co-workers.

Table 8.5: Key codes used in the analysis of the linkages between perception of performance appraisal practice and organizational commitment, in SAND.

The next table provides the frequency of the key codes used in the analysis of the interconnection between perception of performance appraisal and organizational commitment in SAND (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Link between perception of performance appraisal and organizational commitment</i>	7/68
<i>Acknowledging that, within division team structure, it is difficult to get objective and/or accurate assessment of performance through performance appraisal practice</i>	54/68
<i>No reliance on performance appraisal outcomes to see how performance is being evaluated but depends on informal talks</i>	43/68

Table 8.6: Frequency of key codes used in the analysis of the linkages between perception of performance appraisal practice and organizational commitment, in SAND.

The results on the link between perception of performance appraisal and organizational commitment in SAND are mainly based on table 8.6. There was not enough evidence in the data supporting a connection between this division's informants' perception of their performance appraisal practice and their organizational commitment. SAND's informants have generally acknowledged that, within their division's team-based structure, it is often difficult for people to provide objective and/or accurate evaluations of a worker performance through formal appraisal practices. This is perhaps why this division's informants have commonly stated that they do not depend on their performance appraisal results to perceive how their performance is being evaluated; but rather on informal discussions with peers and/or supervisors. The following quote is an example of a verbatim statement (from a SAND informant) portraying her/his view of the performance appraisal practice (this quote was allocated the code: 'Acknowledging that, within division team structure, is it difficult to get objective and/or accurate assessment of performance through performance appraisal practice'):

'[The performance appraisal practice] is a mere formality we don't take it very seriously...the norms that we include in the evaluation sheet they tend to change when we change teams and so sometimes they cannot be quite easily defined, so coming P day they like become outdated or out of context' (Knowledge worker SAND 4, age 50 to less than 60, BSc, 20 or more years of work experience).

Therefore, it might be that perception of performance appraisal does not generally impact SAND's informants' organizational commitment, as these informants seem to acknowledge the difficulty that this practice can have in projecting how their firm is

assessing their work inputs (Chang, 2005; Hutchison and Garstka, 1996; Wayne et al., 1997).

8.2.2.3. Knowledge workers' perception of performance appraisal and job satisfaction in SAND

The next table defines key codes used in the data analysis related to the interconnection between SAND's informants' perception of the performance appraisal practice and their job satisfaction.

Code	Definition
<i>Link between perception of performance appraisal and job satisfaction</i>	Describes a connection between perception of performance appraisal practice and job satisfaction.
<i>Acknowledging that, within division team structure, it is difficult to get objective and/or accurate assessment of performance through performance appraisal practice</i>	Describes worker as acknowledging that, with current team-based structure, it is difficult to objectively and/or accurately assess a worker's performance through formal performance appraisal practices.
<i>No reliance on performance appraisal outcomes to see how performance is being evaluated but depends on informal talks</i>	Describes that worker does not rely on performance appraisal practice to see how her/his performance is being evaluated, but depends on informal talks with supervisors and co-workers.

Table 8.7: Key codes used in the analysis of the linkages between perception of performance appraisal practice and job satisfaction, in SAND.

The following table presents the frequency of the key codes used in the analysis of the interconnection between perception of performance appraisal and job satisfaction in SAND (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Link between perception of performance appraisal and job satisfaction</i>	6/68
<i>Acknowledging that, within division team structure, it is difficult to get objective and/or accurate assessment of performance through performance appraisal practice</i>	54/68
<i>No reliance on performance appraisal outcomes to see how performance is being evaluated but depends on informal talks</i>	43/68

Table 8.8: Frequency of key codes used in the analysis of the linkages between perception of performance appraisal practice and job satisfaction, in SAND.

The findings on the connection between perception of performance appraisal and job satisfaction in SAND are mostly based on table 8.8. There were few indications in the data pointing towards a connection between SAND's informants' perception of the performance appraisal practice and their job satisfaction. Again, most informants in this division seem to agree that it is rather difficult to get objective results out of their yearly formal evaluation, which might have resulted in informants' generally acknowledging that it is difficult for this practice to project how their firm is evaluating the contribution they have made in their jobs (Chang, 2005; Hutchison and Garstka, 1996; Wayne et al., 1997).

8.2.3. Career Opportunities

In order to assist in understanding the connection between SAND's informants' perception of their career opportunities practice and, their organizational commitment and job satisfaction, the next sub-section illustrates informants' perception of the career opportunities practice in this division.

8.2.3.1. Knowledge workers' perception of career opportunities in SAND

Most of SAND's informants were generally satisfied with their career opportunities practice (in terms of prospects for promotion and/or ease of moving between positions and jobs at the same ENG level). Informants in SAND, who were 40 years old or above have generally expressed satisfaction with this practice, because it can facilitate their movements into new jobs and positions while enabling them to maintain their current organizational level. Common themes from this portion of SAND's informants (40 years or above) indicate that such opportunities often allow them to enhance their knowledge and skills, while not having to fairly increase their work responsibilities. These informants in SAND, who were forty years old or above, have generally pointed that they are happy with their achieved level of responsibilities within their firm and have no aspirations to jump into more senior positions because they do not seek additional job responsibilities – as this could influence their personal life. It is worth mentioning that a small fraction of SAND's informants who were 40 years old or above, did mention that they aspire for promotional prospects and these informants often expressed dissatisfaction towards

their career opportunities practice. These informants have explained that they perceive that promotional opportunities are difficult to be achieved within SAND's current career opportunities practice and flat organizational hierarchy.

In parallel, almost all informants in SAND, who were less than 40 years old, were satisfied with their career opportunities. These informants have commonly mentioned that this practice enables them to move between different positions at the same level and seems to offer them opportunities for promotion; which appears to satisfy their aspirations for additional work responsibilities (these informants were all occupying positions that could still let them move one ENG level up the hierarchy). The general trend in the data indicates that SAND's informants (who were less than 40 years old) view their career opportunities practice as having a significant role in enhancing their skills and knowledge.

8.2.3.2. Knowledge workers' perception of career opportunities and organizational commitment in SAND

The next table presents the definition of key codes used in the analysis related to the connection between perception of career opportunities and organizational commitment in SAND.

Code	Definition
<i>Link between perception of career opportunities and organizational commitment</i>	Describes a connection between perception of career opportunities practice and organizational commitment.
<i>Perception of prospects for lateral movements enhances organizational commitment</i>	Describes that perception of career opportunities as facilitating lateral movements between different positions enhances organizational commitment.
<i>Perception of prospects for lateral movements enhances organizational commitment as these prospects can help developing knowledge and skills while satisfying aspiration for not adding on current work responsibilities</i>	Describes that perception of career opportunities, as facilitating lateral movements between different positions, enhances organizational commitment, as such opportunities can provide prospects for knowledge and/or skill development while satisfying aspiration for not adding on current work responsibilities (which could affect personal life).

Code (continued)	Definition
<i>Perception of prospects for lateral movements enhances organizational commitment as these prospects can help developing knowledge and skills</i>	Describes that perception of lateral movements enhances organizational commitment as such opportunities can provide prospects for knowledge and/or skill development.
<i>Perception of lack of opportunities for promotion decreases organizational commitment</i>	Describes that perception of career opportunities as providing little or no prospects for promotion reduces organizational commitment.
<i>Perception of promotional opportunities enhances organizational commitment</i>	Describes that perception of career opportunities as providing prospects for promotion enhances organizational commitment.
<i>Perception of prospects for promotion can impact organizational commitment as these prospects can relate to aspirations for increased levels of work responsibility</i>	Describes that perception of promotional movements impacts organizational commitment as such opportunities can relate to aspirations for increased level of work responsibility.

Table 8.9: Key codes used in the analysis of the linkages between perception of career opportunities practice and organizational commitment.

The following table presents the frequency of the key codes used in the analysis of the linkages between SAND informants' perception of career opportunities and their organizational commitment (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants). As there were some notable differences in views between informants in SAND from different age brackets, the frequencies in table 8.10 account for the age factor.

Code	Frequency
Link between perception of career opportunities and organizational commitment	63/68
<i>Perception of prospects for lateral movements enhances organizational commitment</i>	48/68 (all of the 48 informants were 40 years old or above) 7/68 (all of the 7 informants were below the age of 40)
<i>Perception of prospects for lateral movements enhances organizational commitment as these prospects can help developing knowledge and skills while satisfying aspiration for not adding on current work responsibilities</i>	46/68 (all of the 46 informants were 40 years old or above)

Code (continued)	Frequency
<i>Perception of prospects for lateral movements enhances organizational commitment as these prospects can help developing knowledge and skills</i>	5/68 (all of the 5 informants were below the age of 40)
<i>Perception of lack of opportunities for promotion decreases organizational commitment</i>	8/68 (all of the 8 informants were 40 years old or above)
<i>Perception of promotional opportunities enhances organizational commitment</i>	6/68 (all of the 6 informants were below the age of 40)
<i>Perception of prospects for promotion can impact organizational commitment as these prospects can relate to aspirations for increased levels of work responsibility</i>	7/68 (all of the 7 informants were 40 years old or above) 6/68 (all of the 6 informants were below the age of 40)

Table 8.10: Frequency of key codes used in the analysis of the linkages between perception of career opportunities practice and organizational commitment, in SAND.

The findings on the link between perception of career opportunities and organizational commitment in SAND are primarily based on table 8.10. The results from SAND's interview transcripts indicate that perception of career opportunities can impact this division's informants' organizational commitment. The majority of informants in SAND have pointed that this practice can enhance their organizational commitment, as it provides them with prospects for knowledge and skills development. The following quote is an example of a verbatim statement from a SAND informant, describing a connection between perception of career opportunities and organizational commitment (this quote was allocated the code: 'Link between perception of career opportunities and organizational commitment'):

'Yes I'm proud and happy to be in this company it's very rewarding lots of job opportunities and great career support' (Knowledge worker SAND 5, age 40 to less than 50, BEng, 20 or more years of work experience).

Interestingly, there were some diverging views (related to career opportunities and organizational commitment) given by informants from different age brackets (between informants who were below 40 and ones who were 40 years old or above). Around 70% of informants in SAND (who are all 40 years old or above) have mentioned that, their perception of career opportunities as facilitating horizontal

career movements can help increase their levels of organizational commitment. These informants have generally explained that opportunities for lateral movements between different positions, can enhance their organizational commitment, as such movements can help them develop their knowledge and/or skills, while fulfilling their aspirations for not going into higher positions; that can rather add on their current job responsibilities and consequently, can affect their personal life. It is worth mentioning that there were a smaller number of informants in SAND, who were all 40 years old or above, who seem to seek promotional prospects that offer additional work responsibilities. For this reason, these informants' perception of a lack of promotional prospects appears to reduce their organizational commitment.

In parallel, almost all interviewed workers in SAND, who were in their thirties, have indicated that their perception of their career opportunities (both in terms of facilitating lateral movements and providing promotional prospects) enhances their organizational commitment. These informants have commonly explained that their perception of lateral opportunities enhances their organizational commitment as such prospects can help them develop their knowledge and skills. Furthermore, these informants have generally pointed that their perception of possibilities for promotion increases their organizational commitment as such opportunities can satisfy their aspirations for increased levels of work responsibility.

8.2.3.3. Knowledge workers' perception of career opportunities and job satisfaction in SAND

The following table presents key codes used in the analysis of the connection between perception of career opportunities and job satisfaction in SAND.

Code	Definition
<i>Link between perception of career opportunities and job satisfaction</i>	Describes a connection between perception of career opportunities practice and job satisfaction.
<i>Perception of prospects for lateral movements enhances job satisfaction</i>	Describes that perception of career opportunities as facilitating lateral movements between different positions enhances job satisfaction.

Code (continued)	Definition
<i>Perception of prospects for lateral movements enhances job satisfaction as these prospects can help developing knowledge and skills while satisfying aspiration for not adding on current work responsibilities</i>	Describes that perception of career opportunities as facilitating lateral movements between different positions enhances job satisfaction, as such opportunities can provide prospects for knowledge and/or skill development while satisfying aspiration for not adding on current work responsibilities (which could affect personal life).
<i>Perception of prospects for lateral movements enhances job satisfaction as these prospects can help developing knowledge and skills</i>	Describes that perception of lateral movements enhances job satisfaction as such opportunities can provide prospects for knowledge and/or skill development.
<i>Perception of lack of opportunities for promotion decreases job satisfaction</i>	Describes that perception of career opportunities as providing little or no prospects for promotion reduces job satisfaction.
<i>Perception of promotional opportunities enhances job satisfaction</i>	Describes that perception of career opportunities as providing prospects for promotion enhances job satisfaction.
<i>Perception of prospects for promotion can impact job satisfaction as these prospects can relate to aspirations for increased levels of work responsibility</i>	Describes that perception of promotional movements impacts job satisfaction as such opportunities can relate to aspirations for increased level of work responsibility.

Table 8.11: Key codes used in the analysis of the linkages between perception of career opportunities practice and job satisfaction.

After defining key codes used in the analysis of perception of career opportunities and job satisfaction in SAND, the next table provides the frequencies of each of these codes (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants). Since there were some noteworthy differences in views (pertinent to career opportunities and job satisfaction) provided by informants in SAND who are from different age brackets, the frequencies in table 8.12 take into account the age element.

Code	Frequency
<i>Link between perception of career opportunities and job satisfaction</i>	60/68
<i>Perception of prospects for lateral movements enhances job satisfaction</i>	44/68 (all of the 44 informants were 40 years old or above). 8/68 (all of the 8 informants were below the age of 40).
<i>Perception of prospects for lateral movements enhances job satisfaction as these prospects can help developing knowledge and skills while satisfying aspiration for not adding on current work responsibilities</i>	37/68 (all of the 37 informants were 40 years old or above).
<i>Perception of prospects for lateral movements enhances job satisfaction as these prospects can help developing knowledge and skills</i>	6/68 (all of the 6 informants were below the age of 40)
<i>Perception of lack of opportunities for promotion decreases job satisfaction</i>	8/68 (all of the 8 informants were 40 years old or above).
<i>Perception of promotional opportunities enhances job satisfaction</i>	8/68 (all of the 8 informants were below the age of 40).
<i>Perception of prospects for promotion can impact job satisfaction as these prospects can relate to aspirations for increased levels of work responsibility</i>	5/68 (all of the 5 informants were 40 years old or above) 7/68 (all of the 7 informants were below the age of 40).

Table 8.12: Frequency of key codes used in the analysis of the linkages between perception of career opportunities practice and job satisfaction, in SAND.

The results on the link between perception of career opportunities and job satisfaction in SAND are mainly reliant on table 8.12. The findings point that perception of the career opportunities practice can impact the job satisfaction of most informants in SAND. The majority of informants in SAND have mentioned that this practice can increase their job satisfaction, as it offers them opportunities to enhance their knowledge and skills. The subsequent quote is an example of a verbatim statement (from one informant in SAND) illustrating an interconnection between perception of career opportunities and job satisfaction (this quote was assigned the code: ‘Link between perception of career opportunities and job satisfaction’):

‘I think the role that I am in is very suited to my skills and interests and there are a lot of opportunities to do different work, so I am in a position where I am comfortable with this work and I am happy and it brings me lots of satisfaction with what I do’ (Knowledge worker SAND 6, age 40 to less than 50, MSc, 20 or more years of work experience).

Similarly to the findings on career opportunities and organizational commitment in SAND, there were some notably different views, on career opportunities and job satisfaction, provided by informants from different age groups (between informants who were below 40 and the ones who were 40 years old or above). Around 65% of SAND's informants (who are all 40 years old or above) have indicated that, their perception of career opportunities – as facilitating employee movements between different job positions at the same level – can help enhancing their job satisfaction. These informants have commonly explained that prospects for horizontal movements between diverse positions can increase their job satisfaction, as these opportunities can assist them in developing their skills and knowledge, while not fairly adding on their current work responsibilities; which could affect their personal life. As indicated earlier in this subsection, while the majority of SAND's informants who were 40 years old or above, did not seem to aspire for promotion (as it could add on their current job responsibilities), there were a small number of informants (who were 40 years old or above), who appear to seek promotional prospects. For such reason, it seems that these informants' perception of lack of promotional prospects can reduce their job satisfaction.

In parallel, it appears that perception of career opportunities (both in terms of facilitating lateral movement between positions and providing promotional prospects) can enhance the job satisfaction of the majority of informants in SAND, who were below 40 years old. These informants have generally explained that their perception of horizontal prospects increases their job satisfaction as such opportunities can help them enhance their skills and knowledge. Moreover, these informants have commonly indicated that their perception of prospects for promotion enhances their job satisfaction as these can help satisfying their aspirations for increased levels of job responsibility.

In conclusion, the findings on career opportunities in this division show that there appear to be a connection between SAND's informants' perception of their career opportunities practice and, their organizational commitment and job satisfaction. These informants seem to value prospects that enable them to work on jobs and positions that can allow them to develop and advance their levels of expertise and knowledge. This latter point is not surprising as previous research work supports this study's findings, by emphasizing that knowledge workers

generally need to ensure their employability through career movements that enable them to acquire or maintain their knowledge and expertise (Cappelli, 1999). In effect, the literature indicates that career prospects in terms of promotional advancements can be a central goal for knowledge workers (Horwitz et al., 2003; May et al., 2002). Interestingly however, aspirations for promotional opportunities up the organizational hierarchy were mostly depicted amongst relatively younger knowledge workers (less than forty years old). The findings indeed exhibit that the majority of informants (who are forty years old or above) do look for career opportunities to work in different positions that help them advance their knowledge and expertise. However, as these informants do not aspire for additional work responsibilities, they appear to seek development through horizontal rather than vertical career advancements. In connection with this finding, earlier studies reveal that when employees pass through different career stages as well as different adult phases (with their associated roles and values), their perception of career opportunities can greatly vary (Newell and Dopson, 1996; Super, 1980). Therefore, while prior academic research on knowledge workers emphasizes on promotional prospects and career advancements as a key job attribute for this employee group (Horwitz, 2003; May et al., 2002), this thesis shows that the majority of SAND's informants who are 40 years old or above, also aspire for career movements, but can seek lateral opportunities more than promotional prospects.

8.2.4. Job security

Before presenting the results related to the linkages between this division's informants' perception of job security and, their organizational commitment and job satisfaction, it is helpful to firstly illustrate SAND's informants' perception of their job security practice.

8.2.4.1. Knowledge workers' perception of job security in SAND

The overwhelming majority of interviewed workers in SAND perceive that they have high levels of job security. There is a widespread feeling amongst SAND's informants that HITEC's senior management is keen on attempting to maintain job security in this division, and most informants have stated that they rarely see any

forced redundancies inside SAND. Moreover, many informants in this division have mentioned that in the past, senior management has ensured that most jobs, and particularly key positions, were not laid-off throughout difficult business periods.

8.2.4.2. *Knowledge workers' perception of job security and organizational commitment in SAND*

The following table provides the definition of key codes used in the analysis pertinent to the connection between SAND's informants' perception of job security and their organizational commitment.

Code	Definition
<i>Perception of high levels of job security enhances organizational commitment</i>	Describes that perception of high levels of job security enhances organizational commitment.
<i>Own level of knowledge and expertise enables to rather easily find job in other companies</i>	Describes that worker's level of knowledge and expertise helps her/him to easily find an employment in other organizations.
<i>Perception of high levels job security enhances organizational commitment as it projects signs that firm values the presence of worker in position of key responsibility and/or values the input of worker in such position</i>	Explains that perception of high levels of job security enhances organizational commitment as this perception projects signs that firm values worker presence in position of key responsibility and/or values input of worker in such position.

Table 8.13: Key codes used in the analysis of the linkages between perception of job security practice and organizational commitment.

The next table presents the frequency of the key codes pertinent to the linkages between SAND informants' perception of job security and their organizational commitment (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Link between perception of job security and organizational commitment</i>	56/68
<i>Own level of knowledge and expertise enables to rather easily find job in other companies</i>	61/68
<i>Perception of high levels job security enhances organizational commitment as it projects signs that firm values the presence of worker in position of key responsibility and/or values the input of worker in such position</i>	49/68

Table 8.14: Frequency of key codes used in the analysis of the linkages between perception of job security practice and organizational commitment, in SAND.

The outcomes on the link between perception of job security and organizational commitment in SAND are mainly based on table 8.14. The results indicate that perception of job security can impact the organizational commitment of informants in SAND. While most of SAND's informants appear to perceive themselves as being highly employable, the majority of informants in this division have indicated that their perception of high levels of job security enhances their organizational commitment. SAND's informants have commonly explained that their perception of high degrees of job security increases their organizational commitment as such perception makes them feel that their firm values their presence in positions of key responsibility and/or values their input into such positions. The subsequent quote gives an example of a verbatim statement (from an informant in SAND), describing the link between perception of job security and organizational commitment (this quote was allocated the code: 'Perception of high levels job security enhances organizational commitment as it projects signs that firm values the presence of worker in position of key responsibility and/or values the input of worker in such position'):

'I've been in [this core position] for quite some time now and job security I see it as a sort of recognition for my contribution in this role.... [Job security] makes me wanna contribute even more' (Knowledge worker SAND 7, age 40 to less than 50, BEng, 20 or more years of work experience).

The results on organizational commitment and perception of job security do not seem to relate with earlier studies on knowledge workers – as previous papers often appear to undermine the influence of job security on this employee group (Arthur

and Rousseau, 1996; Reed, 1996). Yet, the findings from SAND could lead to argue that the key positions that SAND's informants occupy are perhaps a likely reason for why their organizational commitment appears to be related to their perception of job security.

8.2.4.3. Knowledge workers' perception of job security and job satisfaction in SAND

The next table defines key codes used on the analysis of the link between perception of job security and job satisfaction, in SAND.

Code	Definition
<i>Link between perception of job security and job satisfaction</i>	Describes a connection between perception of job security practice and job satisfaction.
<i>Job security key job aspiration</i>	Describes worker as seeing job security as key job aspiration.

Table 8.15: Key codes used in the analysis of the linkages between perception of job security practice and job satisfaction.

The subsequent table illustrates the frequency of the key codes used in the analysis of the connection between perception of job security and job satisfaction in SAND (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Link between perception of job security and job satisfaction</i>	3/68
<i>Job security key job aspiration</i>	2/68

Table 8.16: Frequency of key codes used in the analysis of the linkages between perception of job security practice and job satisfaction, in SAND.

The findings on the link between perception of job security and job satisfaction in SAND are predominately reliant on table 8.16. There were little signs in the data supporting a connection between SAND's informants' perception of job security and their job satisfaction. This perhaps could be explained by the existence of few statements pointing that job security is amongst SAND informants' main job

aspirations (Clark, 1996; Locke, 1976). What seems to provide slightly more support for this explanation is that the 2 informants, who viewed job security as a key job aspiration, have indicated that job security enhances their job satisfaction.

8.2.5. Job autonomy

Prior to presenting the findings pertinent to the connection between perception of job autonomy and, organizational commitment and job satisfaction, it is helpful to firstly illustrate the results related to SAND's informants' perception of job autonomy.

8.2.5.1. Knowledge workers' perception of job autonomy in SAND

Around 80% of informants in this division have stated that they are satisfied with the level of influence they have over their job. The general trend in the data indicates that SAND's informants perceive that senior management and/or supervisors often provide them with high degrees of autonomy in their work and in making the decisions related to their organizational positions.

8.2.5.2. Knowledge workers' perception of job autonomy and organizational commitment in SAND

The subsequent table presents the definition of key codes used in analysing the connection between perception of job autonomy and organizational commitment, in SAND.

Code	Definition
<i>Perception of job autonomy enhances organizational commitment</i>	Describes that perception of high levels of job autonomy enhances organizational commitment.
<i>Perception of high levels of job autonomy enhances organizational commitment as it projects that firm trusts the worker inputs or decisions, and/or is recognizing the value of her/his knowledge</i>	Describes that perception of high levels of job autonomy enhances organizational commitment as it projects that firm trusts the worker's inputs or decisions, and/or is recognizing the value of her/his knowledge.

Table 8.17: Key codes used in the analysis of the linkages between perception of job autonomy practice and organizational commitment.

The next table illustrates the frequency of the key codes used in the analysis of the linkages between perception of job autonomy and organizational commitment in SAND (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Perception of job autonomy enhances organizational commitment</i>	54/68
<i>Perception of high levels of job autonomy enhances organizational commitment as it projects that firm trusts the worker inputs or decisions, and/or is recognizing the value of her/his knowledge</i>	39/68

Table 8.18: Frequency of key codes used in the analysis of the linkages between perception of job autonomy practice and organizational commitment, in SAND.

The findings on the link between perception of job autonomy and organizational commitment in SAND are mostly based on table 8.18. It seems that perception of high levels of job autonomy can impact SAND informants' organizational commitment. The general trend in the data points that perception of high levels of job autonomy could enhance the organizational commitment of SAND's informants – as such perceptions could project that the company trusts their inputs or decisions, and/or values the knowledge that they possess. The following quote (from one informant in SAND) is an example of a verbatim statement describing the connection between perception of job autonomy and organizational commitment (this quote was allocated to code: 'Perception of high levels of job autonomy enhances organizational commitment as it projects that firm trusts the worker inputs or decisions, and/or is recognizing the value of her/his knowledge'):

'Because it would be really frustrating for me if people don't trust my work and are always double checking every decision I make I honestly wouldn't work in such an environment'(Knowledge worker SAND 3, age more than 30 to less than 40, MBA, 10 to less than 15 years of work experience).

Such results on job autonomy resonate with previous research, positing that job autonomy can be one of the most important factors behind the retention and organizational commitment of knowledge workers (Horwitz et al., 2003; Kinnear and Sutherland, 2000; Purcell et al., 2009; Thomson and Heron, 2002).

8.2.5.3. Knowledge workers' perception of job autonomy and job satisfaction in SAND

The following table presents the definition of main codes that were used in the analysis of the interconnection between perception of job autonomy and job satisfaction, in SAND.

Code	Definition
<i>Perception of high levels of job autonomy enhances job satisfaction</i>	Describes that perception of high levels of job autonomy enhances job satisfaction.
<i>Job autonomy main job aspiration</i>	Describes that job autonomy is an important job aspiration.

Table 8.19: Key codes used in the analysis of the linkages between perception of job autonomy practice and job satisfaction.

The subsequent table provides the frequency of the key codes used in the analysis of the interconnection between SAND informants' perception of job autonomy and their job satisfaction (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Perception of high levels of job autonomy enhances job satisfaction</i>	57/68
<i>Job autonomy main job aspiration</i>	44/68

Table 8.20: Frequency of key codes used in the analysis of the linkages between perception of job autonomy practice and job satisfaction, in SAND.

The results on the connection between perception of job autonomy and job satisfaction in SAND are mainly reliant on table 8.20. The findings indicate that perception of job autonomy can impact SAND informants' job satisfaction. Informants in this division have commonly stated that their perception of high job autonomy increases their job satisfaction. The following quote (from an informant in SAND) is an example of a verbatim statement illustrating a connection between perception of job autonomy and job satisfaction (this quote was assigned the code: 'Perception of high levels of job autonomy enhances job satisfaction'):

'I've got high degrees of freedom in my work and I love that'...yeah this very much impacts my job satisfaction' (Knowledge worker SAND 8, age 50 to less than 60, MBA, 20 or more years of work experience).

These findings on perception of job autonomy and job satisfaction could perhaps be explained by the general trend in the data indicating that, in their work, SAND's informants greatly aspire for job autonomy. Such job aspirations were highlighted in previous studies on knowledge workers, as these employees were commonly described as seeking high levels of autonomy over how they exert their skills and knowledge (Baron and Hannan, 2002; Horwitz et al., 2003; Kinnear and Sutherland, 2000; May et al., 2002; Morris, 2000; Thompson and Heron, 2002).

8.2.6. Communication

Prior to presenting the findings pertinent to the connection between perception of communication and, organizational commitment and job satisfaction, it is helpful to firstly illustrate the results related to SAND's informants' perception of their communication practice.

8.2.6.1. Knowledge workers' perception of communication in SAND

Common themes from SAND's data indicate that informants in this division are generally satisfied with the communication coming to the workforce through the intranet, the periodic meetings with the CEO and the monthly meetings with the head of the department. SAND's informants have generally mentioned that this flow of information helps keeping their junior workforce up-to-date on the firm's performance, strategy and objectives. Common themes indicate that such type of information (firm performance, goals and strategies) was often communicated to SAND's informants (who are in positions of key responsibility) through informal channels – making them depend less on the communication practice for access to this type of insights. Through these informal channels, SAND's informants have commonly mentioned that they receive plenty of information on organizational performance. Moreover, the general trend in the data indicates, that SAND's informants usually depend on these informal communication channels (rather than

the communication practice) to get insights that often help them further understand how they contribute towards reaching overall company objectives.

8.2.6.2. Knowledge workers' perception of communication and organizational commitment in SAND

The subsequent table presents the definition of key codes used in analysing the interconnection between perception of communication and organizational commitment in SAND.

Code	Definition
<i>Link between perception of communication and organizational commitment</i>	Describes a connection between perception of communication practice and organizational commitment.
<i>In current job position gets most information on company performance, strategy and/or goals through informal communication channels</i>	Describes that in worker's job position she/he gets most information on firm's performance, strategy and/or goals from informal talks and discussions.

Table 8.21: Key codes used in the analysis of the linkages between perception of communication practice and organizational commitment.

The next table presents the frequency of the key codes used in the analysis of the link between perception of communication practice and organizational commitment in SAND (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Link between perception of communication and organizational commitment</i>	7/68
<i>In current job position gets most information on company performance, strategy and/or goals through informal communication channels</i>	45/68

Table 8.22: Frequency of key codes used in the analysis of the linkages between perception of communication practice and organizational commitment, in SAND.

The findings on the link between perception of communication and organizational commitment in SAND are mostly based on table 8.22. There were little signs of a connection between SAND's informants' perception of the communication practice and their organizational commitment. The little evidence

supporting a link between perception of communication practice and organizational commitment in SAND, might be explained by common themes from this division's informants pointing that, at their organizational position, they get most of the information on company performance, strategy and goals through informal communication routes. Therefore, SAND's informants do not seem to need to depend on their division's communication practice to get overall company information. The following quote is an example of a verbatim statement describing how a SAND informant gathers general company information (this quote was allocated the code: 'In current job position gets most information on company performance, strategy and/or goals through informal communication channels'):

Sure I definitely need to be well informed on performance and where we're going, no one loves to work in an obscure environment but in my case I work daily with our director and he's been pretty helpful in providing information on performance and market figures' (Knowledge worker SAND 9, age 40 to less than 50, BEng, 20 or more years of work experience).

8.2.6.3. Knowledge workers' perception of communication and job satisfaction in SAND

The following table presents the definition of main codes related to the analysis of the link between perception of communication and job satisfaction, in SAND.

Code	Definition
<i>Positive perceptions of communication practice enhances job satisfaction</i>	Describes that positive views on communication practice enhance job satisfaction.
<i>Positive perception of communication practice enhances job satisfaction, as good top-down communication assists in the job by keeping peers and/or subordinates informed about company information</i>	Describes that positive perception of communication practice enhances job satisfaction, as good top-down communication keeps peers and/or subordinates informed about company information.

Table 8.23: Key codes used in the analysis of the linkages between perception of communication practice and job satisfaction.

The following table presents the frequency of the key codes used in the analysis of the connection between perception of communication and job satisfaction

in SAND (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Positive perceptions of communication practice enhances job satisfaction</i>	36/68
<i>Positive perception of communication practice enhances job satisfaction, as good top-down communication assists in the job by keeping peers and/or subordinates informed about company information</i>	32/68

Table 8.24: Frequency of key codes used in the analysis of the linkages between perception of communication practice and job satisfaction, in SAND.

The results on the link between perception of communication and job satisfaction in SAND are primarily based on table 8.24. The findings point that perception of communication could impact the job satisfaction of informants in SAND. While most of SAND's informants did not seem to need to rely on the communication practice to gather information on organizational performance and objectives, slightly more than half of informants in this division have mentioned that their positive perception of the communication practice helps enhancing their job satisfaction. There were some common themes from SAND's informants explaining that positive perceptions of the communication practice can enhance job satisfaction, as good communication (from senior to the workforce) helps keeping peers and/or subordinates up-to-date on corporate views and company objectives. This perhaps could be an important factor in the jobs of SAND's informants, as they are occupying positions that often give them responsibility over a number of co-workers and key issues in their division. The following quote is a example of a verbatim statement (from a SAND informant) explaining the link between perception of communication and job satisfaction (this quote was assigned the code: 'Positive perception of communication practice enhances job satisfaction, as good top-down communication assists in the job by keeping peers and/or subordinates informed about company information'):

'Whenever there is a good and ample amount of information flowing down to my boys this always increases my job satisfaction' (Knowledge worker SAND 8, age 50 to less than 60, MBA, 20 or more years of work experience).

8.2.7. Training

Before presenting the results related to the connection between perception of training and, organizational commitment and job satisfaction, it is helpful to firstly, illustrate the findings pertinent to SAND's informants' perception of training.

8.2.7.1. Knowledge workers' perception of training in SAND

Around 60% of informants in SAND have stated that they are satisfied with the training courses provided by the 'HITEC University'. The satisfaction with these training courses was generally related to the benefits that some of the new employees could get from these courses and to a lesser extent, to the availability of 'soft skill' courses that informants could learn from. On the other hand, slightly less than 20% of informants in SAND expressed dissatisfaction with the training practice in SAND. Common themes from the interviews indicate that the dissatisfaction seems to be related to the fact that training courses are offered during working hours. However, it is important to mention that in spite of SAND's informants' level of satisfaction with their training practice, it appears that most of these informants believe that they already possess a high level of knowledge and an extensive expertise (gathered from years of experience). Consequently, almost every interviewed worker in this division (whether satisfied or dissatisfied with this practice) has stated that very few training courses could actually have a significant impact on enhancing his or her work credentials.

8.2.7.2. Knowledge workers' perception of training and organizational commitment in SAND

The following table presents the definition of key codes used in analysing the connection between perception of training and organizational commitment, in SAND.

Code	Definition
<i>Link between perception of training and organizational commitment</i>	Describes a connection between perception of training practice and organizational commitment.
<i>Do not need training courses to enhance knowledge and skills</i>	Describes worker as not needing training courses to advance knowledge and skills.

Table 8.25: Key codes used in the analysis of the linkages between perception of training practice and organizational commitment.

The next table presents the frequency of the key codes used in the analysis of the linkages between perception of training and organizational commitment in SAND (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Link between perception of training and organizational commitment</i>	2/68
<i>Do not need training courses to enhance knowledge and skills</i>	65/68

Table 8.26: Frequency of key codes used in the analysis of the linkages between perception of training practice and organizational commitment, in SAND.

The findings on the connection between perception of training and organizational commitment in SAND are mainly based on table 8.26. There were little signs of a link between SAND's informants' perception of the training practice and their organizational commitment. This might be explained by the fact that the overwhelming majority of informants in SAND have mentioned that they do not generally need their training courses in order to enhance their expertise and knowledge. The following quote is an example of a verbatim statement (from a SAND informant) describing the dependence on training practice (this quote was allocated the code: 'Do not need to depend on training course to enhance knowledge and skills'):

'As I said I've got 2 master degrees and years of experience so for me personally I don't really use the [HITEC] university courses' (Knowledge worker SAND 10, age more than 30 to less than 40, MSc, 10 to less than 15 years of work experience).

These findings seem to fall in line with earlier studies on knowledge workers. Previous research on this employee group states that due to the high levels of knowledge that knowledge workers often possess, they commonly do not seem to learn from formal training programs (May et al., 2002; Purcell et al, 2009).

8.2.7.3. Knowledge workers' perception of training and job satisfaction in SAND

The following table delineates key codes used in analysing the connection between perception of training and job satisfaction, in SAND.

Code	Definition
<i>Link between perception of training and job satisfaction</i>	Describes a connection between perception of training practice and job satisfaction.
<i>Do not need training courses to enhance knowledge and skills</i>	Describes worker as not needing training courses to advance knowledge and skills.

Table 8.27: Key codes used in the analysis of the linkages between perception of training practice and job satisfaction.

The subsequent table presents the frequency of the key codes used in the analysis of the interconnection between perception of training practice and job satisfaction in SAND (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Link between perception of training and job satisfaction</i>	1/68
<i>Do not need to depend on training course to enhance knowledge and skills</i>	65/68

Table 8.28: Frequency of key codes used in the analysis of the linkages between perception of training practice and job satisfaction, in SAND.

The outcomes on the link between perception of training and job satisfaction in SAND are mostly reliant on table 8.28. There were little signs of a connection between SAND's informants' perception of the training practice and their job satisfaction. Again, the general trend in the data points that these informants do not

need training courses in order to advance the knowledge and skills needed in their jobs (Horwitz et al., 2003; May et al., 2002).

8.2.8. Employee Selection

In order to assist in the understanding of the connection between perception of the selection practice and attitudes, the next subsection illustrates SAND's informants' perception of this practice.

8.2.8.1. Knowledge workers' perception of selection in SAND

Around 67% of informants in SAND expressed signs of satisfaction with the employee selection methods in their group. Common themes indicate that this division's informants seem to believe that their selection practice encompasses numerous steps that extensively screen candidates through tests and a series of in-depth interviews that cover both technical capabilities and personality-related factors.

8.2.8.2. Knowledge workers' perception of selection and organizational commitment in SAND

The following table presents the definition of a key code used in the analysis of the connection between perception of selection and organizational commitment, in SAND.

Code	Definition
<i>Link between perception of selection and organizational commitment</i>	Describes a connection between perception of selection practice and organizational commitment.

Table 8.29: Key code used in the analysis of the linkages between perception of selection practice and organizational commitment.

The next table presents the frequency of this key code used in the analysis of the connection between SAND's informants' perception of selection and their organizational commitment.

Code	Frequency
<i>Link between perception of selection and organizational commitment</i>	5/68

Table 8.30: Frequency of key code used in the analysis of the linkages between perception of selection practice and organizational commitment, in SAND.

The findings on perception of selection and organizational commitment in SAND are mainly based on table 8.30. Whereas the selection of high quality skills and knowledge could be an important factor for KIFs (Baron and Hannan, 2002), there were few informants in SAND who have indicated that their perception of their selection practice impacts their organizational commitment. The data analysis of the direct connection between perception of selection and organizational commitment did not present clear and apparent reasons for this finding. As well, previous research does not seem to provide enough explanations on the influence of the selection practice on knowledge workers (Horwitz et al., 2003).

8.2.8.3. Knowledge workers' perception of selection and job satisfaction in SAND

The subsequent table defines a key code used in the analysis pertinent to the connection between perception of selection and job satisfaction, in SAND.

Code	Definition
<i>Link between perception of selection and job satisfaction</i>	Describes a connection between perception of selection practice and job satisfaction.

Table 8.31: Key code used in the analysis of the linkages between perception of selection practice and job satisfaction.

The following table illustrates the frequency of the key code used in the analysis of the connection between perception of selection and job satisfaction in SAND.

Code	Frequency
<i>Link between perception of selection and job satisfaction</i>	4/68

Table 8.32: Frequency of key code used in the analysis of the linkages between perception of selection practice and job satisfaction, in SAND.

Again, whilst the selection of high quality skills and knowledge could be a significant factor for KIFs (Baron and Hannan, 2002), there were few informants in SAND who have pointed towards a straightforward connection between their perception of their selection practice and their job satisfaction. There were no clear explanations for this finding in the analysis of the direct link between SAND informants' perception of their selection practice and their job satisfaction.

8.3. Relationship between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction: AEROS

The following subsections present results related to AEROS informants' perception of the HR practices that are present in their division and mainly, how these perceptions can influence their organizational commitment and job satisfaction. It is important to recall that both SAND and AEROS were subject to the same HR practices (with the exception of the difference in the employee selection practice).

8.3.1. Compensation

To assist in the understanding of the interconnection between AEROS informants' perception of the compensation practice and, their organizational commitment and job satisfaction, the next subsection presents the results pertinent to these informants' perception of the compensation practice inside their division.

8.3.1.1. Knowledge workers' perception of compensation in AEROS

The overwhelming majority of AEROS informants have mentioned that their compensation practice encompasses a fixed salary, a variable pay component and a long-term incentive plan element (chapter 7 described the actual presence of these elements of compensation within the AEROS division). Almost every informant in this division has mentioned that his or her fixed salary is lower than industry pay benchmarks for similar positions. In relation to the variable pay, this component of compensation was generally seen by AEROS informants as representing a small sign of recognition from senior management but one that does not compensate for the low salaries provided by the firm (the financial worth of the variable pay component was generally described as not exceeding 2 or 3 % of the overall salary). However, the

long-term incentive plan was often perceived by AEROS informants as a significant monetary reward that commonly compensates for the differences in fixed salaries between their firm and other aerospace companies within the same sector. The general trend in the data points that AEROS informants seem to be pleased by the LTIP element of the compensation practice; as they were keen towards having an overall compensation that is close to their industry's remuneration standards. While AEROS informants have generally mentioned that their overall compensation is rather close to the market pay standards, it is important to note, that common themes from the interviews indicate that AEROS informants believe that the highly specialized knowledge and experience that they possess often enable them to earn additional monetary rewards; if they decide to shift to other companies within their aerospace market segment. These results on perception of compensation in AEROS resonate with earlier studies on knowledge workers. This employee group is often described as being highly directed towards the external job market (May et al., 2002; Reed, 1996), and is generally characterized as possessing a degree of knowledge and expertise that allows it to have some level of control over how much it could gain as a compensation for its services (Barney, 1991; May et al., 2002; Purcell et al., 2009; Reed, 1996).

8.3.1.2. Perception of compensation and knowledge workers' organizational commitment in AEROS

The analysis of the link between AEROS informants' perception of compensation and their organizational commitment uses the key codes defined in table 8.1. The next table presents the frequency of these key codes in AEROS (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Link between perception of compensation and organizational commitment</i>	35/38
<i>Perception of LTIP as making overall compensation comparable to industry standards helps in making worker wanting to remain in the organization</i>	32/38
<i>Perception of overall compensation as notably lower than industry standards could make worker think of leaving organization</i>	29/38

Code (continued)	Frequency
<i>Perception of compensation as being notably lower than market could make worker think of changing firms, as such perception could project that organization does not value the worker</i>	27/38
<i>Perception of compensation as being non-competitive in comparison with industry reduces organizational commitment</i>	1/38
<i>Not seeking for additional pay in comparison with the industry</i>	24/38
<i>Looking for aspects of the job in the firm more than competitive pay in comparison with industry</i>	22/38
<i>Looking for features of co-worker relations in firm more than competitive pay in comparison with industry</i>	2/38

Table 8.33: Frequencies of key codes used in the analysis of the interconnection between perception of compensation practice and organizational commitment, in AEROS.

The findings pertinent to the link between perception of compensation and organizational commitment in AEROS are mainly based on table 8.33. The data points that perception of compensation can influence the organizational commitment of AEROS informants. The majority of informants in this division have mentioned that their perception of their overall compensation (fixed pay, variable pay and long-term incentive plan) as being close to market compensation standards, makes them not think of changing employers. Moreover, informants in this division have stated that if they view that their overall compensation is becoming markedly lower than industry benchmarks then this could encourage them to leave their firm. The next quote provides an example of an AEROS informant view related to the connection between perception of compensation and organizational commitment (this quote was assigned the code: ‘Link between perception of compensation and organizational commitment’):

‘The [long term incentive] plan is very essential for me and I think they know that...no there is no way I would work here if they decide to cancel this plan’ (Knowledge worker AEROS 1, age 50 to less than 60, PhD, 20 or more years of work experience).

The general trend from AEROS informants seems to explain the link between their perception of compensation and their organizational commitment. Common themes in AEROS transcripts indicate that if these informants perceive that their overall remuneration is notably lower than industry standards, they might then seek to change organizations as such perception can make them feel that they are not valued

by their company. The next quote gives an example of a verbatim statement from an AEROS informant explaining the interconnection between perception of compensation and organizational commitment (this quote was assigned the code: 'Perception of compensation as being notably lower than market could make worker think of changing firms, as such perception could project that organization does not value the worker'):

'I just want to feel that I'm appreciated by senior and so if my pay is low I guess I would feel that there is a lack of appreciation...when I sense there is no appreciation well I guess I donno I guess I'll start looking around' (Knowledge worker AEROS 2, age 40 to less than 50, MEng, 20 or more years of work experience).

The findings pertinent to AEROS informants' perception of compensation and their organizational commitment resonate with earlier studies emphasizing that remuneration could impact the attitudes of knowledge workers (Baron and Hannan, 2002; Horwitz et al., 2003). Moreover, the outcomes that seem to explain this link fall in line with previous research, which points that knowledge workers are often highly directed towards the external job market (May et al., 2002; Reed, 1996), and that they recognize the value of the knowledge and abilities they possess (Barney, 1991; May et al., 2002; Reed, 1996).

However, whereas perception of notably lower compensation between the firm and industry standards is likely to reduce the organizational commitment of AEROS informants, there is little evidence in the data pointing that the perception of compensation, as not being competitive (i.e. not offering notable additional compensation than other companies within the industry), can decrease the organizational commitment of AEROS informants. This might be explained by common themes in the data indicating that this division's informants do not aspire for additional compensation in comparison with the industry. In particular, many informants have stated that they look more for features of the job in their firm than additional financial rewards. These results fall in line with scholars' claims indicating that knowledge workers are usually more interested in aspects of their jobs than additional monetary compensation (Alvesson, 1993; Horwitz et al., 2003; May et al., 2002; Thomson and Heron, 2002).

8.3.1.3. *Perception of compensation and knowledge workers' job satisfaction in AEROS*

The key codes used in the analysis of the link between perception of compensation and job satisfaction in AEROS are defined in table 8.3. The following table illustrates the frequencies of these key codes in AEROS.

Code	Frequency
<i>Perception of compensation does not impact job satisfaction</i>	36/38
<i>Monetary compensation key aspiration in job</i>	0/38

Table 8.34: Frequency of key codes used in the analysis of the linkages between perception of compensation and job satisfaction in AEROS.

The results on the link between perception of compensation and job satisfaction in AEROS are mostly reliant on table 8.34. The findings indicate that perception of compensation is not likely to impact the job satisfaction of informants in this division. Almost all informants in AEROS have mentioned that their perception of compensation practice does not impact their job satisfaction. The next quote is an example of a verbatim statement (from an informant in AEROS) related to the connection between perception of compensation and job satisfaction (this quote was allocated the code: 'Perception of compensation does not impact job satisfaction'):

'My pay doesn't give me a buzz in my job... it's not what builds my satisfaction' (Knowledge worker AEROS 3, age 40 to less than 50, BEng, 20 or more years of work experience).

In earlier studies on the job satisfaction construct, researchers have pointed that job satisfaction is mostly influenced by the key elements that workers aspire for in their work (Clark, 1996; Locke, 1976). This perhaps explains the apparent lack of a connection between perception of compensation and job satisfaction in AEROS, since there were no signs in the data indicating that remuneration is a main job aspiration for this division's informants.

8.3.2. Performance Appraisal

Prior to presenting the results related to the link between AEROS informants' perception of performance appraisal and, their organizational commitment and job satisfaction, it is helpful to illustrate these informants' perception of the performance appraisal practice that is present inside AEROS.

8.3.2.1. Knowledge workers' perception of performance appraisal in AEROS

AEROS informants have commonly stated that the results of their formal yearly performance appraisal are generally viewed by them and other employees in their division as being fairly subjective. Common themes in AEROS interview transcripts indicate that the subjective characteristic of this practice is mainly due to the nature of aerospace work being conducted in this division. AEROS informants have generally pointed that their aerospace designs often require several years of testing and retesting before their features could be truly evaluated. These informants have commonly mentioned that such nature of work generally makes it difficult to place concrete performance criteria and then objectively evaluating them on a yearly basis; especially if the assessment occurs prior to them completing the testing of design elements. Nonetheless, whereas a large portion of informants in AEROS have described their performance appraisal as being subjective, a minority of informants in this division have expressed feelings of dissatisfaction towards this practice. AEROS informants have commonly stated that they realize that within their type of industry it is difficult to enhance the objectivity of the formal evaluation, particularly for workers who possess advanced experience in specific aerospace segments.

8.3.2.2. Knowledge workers' perception of performance appraisal and organizational commitment in AEROS

The following table defines key codes used in the analysis of the connection between perception of performance appraisal practice and organizational commitment, in AEROS.

Code	Definition
<i>Link between perception of performance appraisal and organizational commitment</i>	Describes a connection between perception of performance appraisal practice and organizational commitment.
<i>Acknowledging that, within division type of aerospace work, is it difficult to get objective and/or accurate assessment of performance through performance appraisal practice</i>	Describes worker as acknowledging that, with current division type of aerospace work, it is difficult to objectively and/or accurately assess a worker's performance through the formal yearly performance appraisal practice.
<i>No reliance on performance appraisal outcomes to see how performance is being evaluated but depends on informal talks</i>	Describes that worker does not rely on results of performance appraisal practice to see how her/his performance is being evaluated, but depends on informal talks with supervisors and co-workers.

Table 8.35: Key codes used in the analysis of the linkages between perception of performance appraisal practice and organizational commitment, in AEROS.

The next table presents the frequency of the key codes used in the analysis of the link between perception of performance appraisal and organizational commitment in AEROS (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Link between perception of performance appraisal and organizational commitment</i>	3/38
<i>Acknowledging that, within division type of aerospace work, is it difficult to get objective and/or accurate assessment of performance through performance appraisal practice</i>	26/38
<i>No reliance on performance appraisal outcomes to see how performance is being evaluated but depends on informal talks</i>	23/38

Table 8.36: Frequency of key codes used in the analysis of the linkages between perception of performance appraisal practice and organizational commitment, in AEROS.

The results on the link between perception of performance appraisal and organizational commitment in AEROS are mainly based on table 8.36. There was little evidence in the data supporting a link between AEROS informants' perception of their performance appraisal and their organizational commitment. This division's informants have commonly stated that they realize that within their type of aerospace work, it is often difficult to evaluate a worker performance through formal yearly

appraisal practices. This could explain why AEROS informants have commonly mentioned that they do not rely on their performance appraisal practice to view how their work is being assessed; but mostly on informal discussions with peers and/or supervisors. The subsequent quote is an example of a verbatim statement (from an AEROS informant) illustrating an informant view of performance appraisal in AEROS (this quote was allocated the code: ‘Acknowledging that, within division type of aerospace work, is it difficult to get objective and/or accurate assessment of performance through performance appraisal practice’):

‘I do some appraisals and I’m aware that it’s a tremendous challenge to assess my work when the assessment needs to be done in predetermined timeframes...because you know we don’t have the normal design jobs that other industries have’ (Knowledge worker AEROS 4, age more than 30 to less than 40, MBA, 10 to less than 15 years of work experience).

Accordingly, it could be that perception of performance appraisal does not generally influence AEROS informants’ organizational commitment, since these informants seem to acknowledge that it is difficult for this practice to project how their company is evaluating their performance (Chang, 2005; Hutchison and Garstka, 1996; Wayne et al., 1997).

8.3.2.3. Knowledge workers’ perception of performance appraisal and job satisfaction in AEROS

The following table defines key codes used in the data analysis pertinent to the connection between AEROS informants’ perception of the performance appraisal practice and their job satisfaction.

Code	Definition
<i>Link between perception of performance appraisal and job satisfaction</i>	Describes a connection between perception of performance appraisal practice and job satisfaction.
<i>Acknowledging that, within division type of aerospace work, is it difficult to get objective and/or accurate assessment of performance through performance appraisal practice</i>	Describes worker as acknowledging that, with current division type of aerospace work, it is difficult to objectively and/or accurately assess a worker’s performance through the formal yearly performance appraisal practice.

Code (continued)	Definition
<i>No reliance on performance appraisal outcomes to see how performance is being evaluated but depends on informal talks</i>	Describes that worker does not rely on performance appraisal practice to see how her/his performance is being evaluated, but depends on informal talks with supervisors and co-workers.

Table 8.37: Key codes used in the analysis of the linkages between perception of performance appraisal practice and job satisfaction, in AEROS.

The subsequent table presents the frequency of the key codes used in the analysis of the link between perception of performance appraisal and job satisfaction in AEROS (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Link between perception of performance appraisal and job satisfaction</i>	3/38
<i>Acknowledging that, within division type of aerospace work, is it difficult to get objective and/or accurate assessment of performance through performance appraisal practice</i>	26/38
<i>No reliance on performance appraisal outcomes to see how performance is being evaluated but depends on informal talks</i>	23/38

Table 8.38: Frequency of key codes used in the analysis of the linkages between perception of performance appraisal practice and job satisfaction, in AEROS.

The findings pertinent to the link between perception of performance appraisal and job satisfaction in AEROS are mainly dependent on table 8.38. There was little evidence in the data supporting a connection between AEROS informants' perception of their performance appraisal practice and their job satisfaction. Once more, it appears that most informants in this division realize that it is fairly difficult to obtain objective results from their yearly formal appraisal, which appears to have resulted in many of them acknowledging that it is difficult for this practice to project how their organization is evaluating their work input (Chang, 2005; Hutchison and Garstka, 1996; Wayne et al., 1997).

8.3.3. Career Opportunities

In order to help in the understanding of the interconnection between perception of the career opportunities practice and, organizational commitment and job satisfaction, the following subsection presents AEROS informants' perception of their career opportunities practice.

8.3.3.1. Knowledge workers' perception of career opportunities in AEROS

AEROS informants have commonly expressed feelings of satisfaction towards their career opportunities practice (in terms of prospects for promotion and/or ease of moving between positions and jobs at the same ENG level). This division's informants who were 40 years old or above were generally satisfied with this practice, because it can facilitate their movements into new positions while enabling them to maintain their current organizational level. The general trend in the data – for this segment of AEROS informants (40 years or above) – points that these prospects generally help them in developing their knowledge and skills level without requiring them to rather increase their job responsibilities. In general, this portion of AEROS informants seems to be pleased with its achieved level of responsibilities within the firm and did not show signs of aspirations for career promotions – as this could affect its personal life. It is worth indicating that a small fraction of AEROS informants who were 40 years old or above, did state that they search for promotional opportunities and, these informants were often dissatisfied with their career opportunities practice. These informants have clarified that they view little prospects for promotions inside AEROS; within the actual career opportunities practice and their division's flat hierarchy.

With regard to AEROS informants who were less than 40 years old, these were overwhelmingly satisfied with their career opportunities practice. These informants have generally indicated that this practice can allow them to move between different positions at the same level and appears to provide them with prospects for promotion; which seems to satisfy their aspirations for adding on their current work responsibilities (these informants were all occupying positions that could still let them move one ENG level up the hierarchy). Common themes from AEROS informants (who were less than 40 years old) point that they perceive their

career opportunities practice as having an important function in developing their skills and knowledge.

8.3.3.2. *Knowledge workers' perception of career opportunities and organizational commitment in AEROS*

Key codes used in the analysis of the link between AEROS informants' perception of their career opportunities and their organizational commitment are defined in table 8.9. The next table illustrates the frequency of the key codes used in the analysis of the interconnection between this division's informants' perception of career opportunities and their organizational commitment (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
Link between perception of career opportunities and organizational commitment	37/38
<i>Perception of prospects for lateral movements enhances organizational commitment</i>	26/38 (all of the 26 informants were 40 years old or above) 7/38 (all of the 7 informants were below the age of 40)
<i>Perception of prospects for lateral movements enhances organizational commitment as these prospects can help developing knowledge and skills while satisfying aspiration for not adding on current work responsibilities</i>	25/38 (all of the 25 informants were 40 years old or above)
<i>Perception of prospects for lateral movements enhances organizational commitment as these prospects can help developing knowledge and skills</i>	7/38 (all of the 7 informants were below the age of 40)
<i>Perception of lack of opportunities for promotion decreases organizational commitment</i>	4/38 (all of the 4 informants were 40 years old or above)
<i>Perception of promotional opportunities enhances organizational commitment</i>	6/38 (all of the 6 informants were below the age of 40)

Code (continued)	Frequency
<i>Perception of prospects for promotion can impact organizational commitment as these prospects can relate to aspirations for increased levels of work responsibility</i>	3/38 (all of the 3 informants were 40 years old or above) 4/68 (all of the 4 informants were below the age of 40)

Table 8.39: Frequency of key codes used in the analysis of the linkages between perception of career opportunities practice and organizational commitment, in AEROS.

The results on the link between perception of career opportunities and organizational commitment in AEROS are mainly reliant on table 8.39. The findings from AEROS point that perception of the career opportunities practice can impact this division's informants' organizational commitment. The majority of informants in AEROS have indicated that this practice can increase their organizational commitment, as it helps them in developing their skills and knowledge. The subsequent quote is an example of a verbatim statement (from an AEROS informant) illustrating a link between perception of career opportunities and organizational commitment (this quote was allocated the code: 'Link between perception of career opportunities and organizational commitment'):

'If I stay [in this position] I might become unattractive on the long run, and this is the biggest fear for any person in my shoe, so I am happy that the company is looking after me in terms of those lateral opportunities and this is one of the main reasons that kept me here' (Knowledge worker AEROS 5, age 50 to less than 60, BSc, 20 or more years of work experience).

Interestingly, there were some diverging views (pertinent to career opportunities and organizational commitment) provided by informants from different age brackets (amid informants who were below 40 and ones who were 40 years old or above). Nearly 70% of AEROS informants (who are all 40 years old or above) have stated that, their perception of career opportunities as aiding in horizontal career movements can enhance their organizational commitment. These informants have commonly explained that prospects for lateral movements between different positions can increase their organizational commitment as such movements can assist them in developing their knowledge and/or skills, while fulfilling their aspirations for not jumping into higher positions that can fairly add on their present

job responsibilities (which could influence their personal life). It is worth pointing that there were a smaller number of informants in AEROS, who were all 40 years old or above, who appear to aspire for promotional prospects that offer additional job responsibilities. For this reason, these informants' views of a lack of promotional opportunities in their division seem to decrease their organizational commitment.

Separately, almost all informants in AEROS, who were in their thirties, have mentioned that their perception of their career opportunities (in terms of facilitating lateral movements and providing promotional opportunities) increases their organizational commitment. These informants have generally explained that their perception of horizontal opportunities enhances their organizational commitment as such prospects can assist them in developing their knowledge and skills. Moreover, these informants have commonly indicated that their perception of possibilities for promotion enhances their organizational commitment as these prospects can satisfy their aspirations for enhanced levels of job responsibility.

8.3.3.3. Knowledge workers' perception of career opportunities and job satisfaction in AEROS

Key codes used in the analysis of the link between perception of career opportunities and job satisfaction in AEROS, are presented in table 8.11. The next table illustrates the frequency of the key codes used in the analysis of the connection between perception of career opportunities and job satisfaction in AEROS (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Link between perception of career opportunities and job satisfaction</i>	36/38
<i>Perception of prospects for lateral movements enhances job satisfaction</i>	25/38 (all of the 25 informants were 40 years old or above). 6/38 (all of the 6 informants were below the age of 40).
<i>Perception of prospects for lateral movements enhances job satisfaction as these prospects can help developing knowledge and skills while satisfying aspiration for not adding on current work responsibilities</i>	20/38 (all of the 20 informants were 40 years old or above).

Code (continued)	Frequency
<i>Perception of prospects for lateral movements enhances job satisfaction as these prospects can help developing knowledge and skills</i>	4/68 (all of the 4 informants were below the age of 40)
<i>Perception of lack of opportunities for promotion decreases job satisfaction</i>	4/38 (all of the 4 informants were 40 years old or above).
<i>Perception of promotional opportunities enhances job satisfaction</i>	7/38 (all of the 7 informants were below the age of 40).
<i>Perception of prospects for promotion can impact job satisfaction as these prospects can relate to aspirations for increased levels of work responsibility</i>	4/38 (all of the 4 informants were 40 years old or above) 6/38 (all of the 6 informants were below the age of 40).

Table 8.40: Frequency of key codes used in the analysis of the linkages between perception of career opportunities practice and job satisfaction, in AEROS.

The outcomes on perception of career opportunities and job satisfaction in AEROS are predominantly based on table 8.40. The results indicate that perception of the career opportunities practice can influence the job satisfaction of AEROS informants. The majority of informants in AEROS have indicated that this practice could enhance their job satisfaction, as it provides them with prospects that help them develop their skills and knowledge. The following quote is an example of a verbatim statement (from an AEROS informant) describing a link between perception of career opportunities and job satisfaction (this quote was allocated the code: ‘Link between perception of career opportunities and job satisfaction’):

‘I don’t want further responsibilities but I would be more satisfied in my job if they would let me go into project management’ (Knowledge worker AEROS 6, age 40 to less than 50, MEng, 20 or more years of work experience).

Apparently, there were some notably different views (pertinent to career opportunities and job satisfaction) given by AEROS informants from different age brackets (between informants who were below 40 and the ones who were 40 years old or above). Nearly 65% of AEROS informants (who are all 40 years old or above) have mentioned that, their perception of their career opportunities practice, in terms of aiding workers’ movements between different positions at the same level, can increase their job satisfaction. These informants have generally explained that opportunities for horizontal movements between different job positions can enhance their job satisfaction, as these prospects can help them develop their skills and

knowledge while not notably adding on their present job responsibilities. As stated previously in this subsection, whereas the majority of AEROS informants, who were 40 years old or above, did not appear to look for promotional prospects, there were a small number of informants (who were 40 years old or above), who seem to aspire for promotional opportunities. For this reason, it appears that these informants' perception of lack of promotional opportunities can reduce their job satisfaction.

In parallel, it appears that perception of career opportunities (in terms of facilitating horizontal movement between positions and offering promotional prospects) can increase the job satisfaction of the majority of AEROS informants, who were below 40 years old. These informants have commonly explained that their perception of lateral opportunities enhances their job satisfaction as these prospects can assist them in developing their skills and knowledge. Furthermore, these informants have generally pointed that their perception of opportunities for promotion increase their job satisfaction as these can help satisfying their aspirations for enhanced degrees of work responsibility.

In sum, the results on career opportunities in AEROS portray that perception of career opportunities can impact informants' organizational commitment and job satisfaction. AEROS informants appear to value opportunities that help them to go into positions that can enable them to advance their skills and knowledge. This finding falls in line with earlier studies, which emphasize that knowledge workers can greatly aspire for movements between different work positions, as these could help them enhance their knowledge and capabilities (Cappelli, 1999). Nonetheless, while previous research highlights the importance of promotional prospects for knowledge workers (Horwitz et al., 2003; May et al., 2002), the results from AEROS point that aspirations for promotion were mostly found in relatively younger knowledge workers (less than forty years old). Most informants in AEROS, who were forty years old or above, seem to aspire for movements between different positions in order to enhance their credentials. However, as these informants do not seem to look for additional job responsibilities, they appear to seek development through lateral movements instead of promotion up the hierarchy. In relation to this, previous research claims that when workers go through different career phases as well as various adult stages, their views on career opportunities might substantially differ (Newell and Dopson, 1996; Super, 1980). Accordingly, whereas previous

research on knowledge workers highlights the importance of promotion as a key job aspiration for this employee group (Horwitz, 2003; May et al., 2002), the findings from AEROS indicate that informants who were 40 years old or above, appear to seek lateral opportunities more so, than promotional prospects.

8.3.4. Job security

Prior to presenting the findings on the link between perception of job security and, organizational commitment and job satisfaction, it is helpful to illustrate AEROS informants' perception of their job security practice.

8.3.4.1. Knowledge workers' perception of job security in AEROS

The vast majority of AEROS informants have mentioned that they have high levels of job security. This division's informants have commonly stated that they feel that senior management is devoted towards securing employees' jobs in AEROS, and that there are little forced redundancies inside this division, particularly for employees in positions of key responsibility.

8.3.4.2. Knowledge workers' perception of job security and organizational commitment in AEROS

Key codes used in the analysis of the connection between AEROS informants' perception of job security and their organizational commitment are delineated in table 8.13. The following table illustrates the frequency of the key codes used in the analysis of the link between perception of job security and organizational commitment in AEROS (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Link between perception of job security and organizational commitment</i>	30/38
<i>Own level of knowledge and expertise enables to rather easily find job in other companies</i>	34/38

Code (continued)	Frequency
<i>Perception of high levels job security enhances organizational commitment as it projects signs that firm values the presence of worker in position of key responsibility and/or values the input of worker in such position</i>	26/38

Table 8.41: Frequency of key codes used in the analysis of the linkages between perception of job security practice and organizational commitment, in AEROS.

The outcomes on the connection between perception of job security and organizational commitment in AEROS are mainly based on table 8.41. The findings indicate that AEROS informants' perception of job security can impact their organizational commitment. Whereas the majority of informants in AEROS seem to believe that they possess high employability levels, most informants in this division have pointed that their perception of high levels of job security increases their organizational commitment. Informants from AEROS have generally mentioned that their perception of high levels of job security enhances their organizational commitment as this perception projects that the organization values their presence in positions of key responsibility and/or values their input into such positions. The following quote provides an example of a verbatim statement (from an AEROS informant), illustrating the connection between perception of job security and organizational commitment (this quote was assigned the code: 'Link between perception of job security and organizational commitment'):

'They didn't let go of me even during the harshest periods and I appreciate that a lot, therefore even if God forbids we face difficult times all over again, I can tell you for sure I won't let them down and I will do my utmost to stand by my company' (Knowledge worker AEROS 1, age 50 to less than 60, PhD, 20 or more years of work experience).

The findings on perception of job security and organizational commitment do not appear to fall in line with previous studies on knowledge workers. This is because earlier research has often undermined the influence of this HR practice on knowledge workers (Arthur and Rousseau, 1996; Reed, 1996). Therefore, the key positions that AEROS informants occupy might be a likely reason for why job security appears to influence their organizational commitment.

8.3.4.3. Knowledge workers' perception of job security and job satisfaction in AEROS

Key codes used in the analysis of the interconnection between perception of job security and job satisfaction in AEROS are defined in table 8.15. The following table provides the frequency of the key codes used in the analysis of the link between AEROS informants' perception of job security and their job satisfaction (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Link between perception of job security and job satisfaction</i>	3/38
<i>Job security key job aspiration</i>	3/38

Table 8.42: Frequency of key codes used in the analysis of the linkages between perception of job security practice and job satisfaction, in AEROS.

The results on the connection between AEROS informants' perception of job security and job satisfaction are mostly based on table 8.42. There were little signs in the data that help supporting a link between AEROS informants' perception of job security and their job satisfaction. This might be explained by the presence of little verbatim statements (from AEROS informants) indicating that job security is a key job aspiration (Clark, 1996; Locke, 1976). It is worth noting that the three informants, who had job security as a key job aspiration in AEROS, have mentioned that high levels of job security can enhance their job satisfaction.

8.3.5. Job autonomy

In order to assist in the understanding of the connection between AEROS informants' perception of job autonomy and their attitudes, the next subsection presents findings related to these informants' perception of job autonomy.

8.3.5.1. Knowledge workers' perception of job autonomy in AEROS

Around 86% of AEROS informants have mentioned that they are satisfied with the influence they have over their jobs. Common themes point that AEROS informants believe that their supervisors and senior management generally offer them a high level of autonomy in the decisions they make and the tasks they undertake in their positions.

8.3.5.2. Knowledge workers' perception of job autonomy and organizational commitment in AEROS

Key codes used in the analysis of the connection between AEROS informants' perception of job autonomy and their organizational commitment are delineated in table 8.17. The following table presents the frequency of the key codes used in the analysis of the link between perception of job autonomy and organizational commitment in AEROS (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Perception of job autonomy enhances organizational commitment</i>	32/38
<i>Perception of high levels of job autonomy enhances organizational commitment as it projects that firm trusts the worker inputs or decisions, and/or is recognizing the value of her/his knowledge</i>	24/38

Table 8.43: Frequency of key codes used in the analysis of the linkages between perception of job autonomy practice and organizational commitment, in AEROS.

The findings on the link between perception of job autonomy and organizational commitment in AEROS are mainly based on table 8.43. It seems that perception of job autonomy can influence the organizational commitment of informants in AEROS. Common themes from the data indicate that perception of high degrees of job autonomy could increase the organizational commitment of the majority of AEROS informants; as this perception could reflect that the organization trusts their input and/or the decisions they make, and/or values the knowledge they

possess. The next quote (from an informant in AEROS) is an example of a verbatim statement describing the link between perception of job autonomy and organizational commitment (this quote was assigned the code: ‘Perception of job autonomy enhances organizational commitment’):

‘No not really, the more influence they give me the more happy I would be to help them out’ (Knowledge worker AEROS 7, age more than 30 to less than 40, MSc, 10 to less than 15 years of work experience).

The findings on job autonomy and organizational commitment in AEROS, fall in line with earlier research, indicating that job autonomy could represent one of the most prominent factors behind the retention and the organizational commitment of knowledge workers (Horwitz et al., 2003; Kinnear and Sutherland, 2000; Purcell et al., 2009; Thomson and Heron, 2002).

8.3.5.3. Knowledge workers’ perception of job autonomy and job satisfaction in AEROS

Key codes used in the analysis of the link between AEROS informants’ perception of job autonomy and their job satisfaction are defined in table 8.19. The next table presents the frequency of the key codes used in the analysis of the connection between AEROS informants’ perception of job autonomy and their job satisfaction (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Perception of high levels of job autonomy enhances job satisfaction</i>	33/38
<i>Job autonomy main job aspiration</i>	31/38

Table 8.44: Frequency of key codes used in the analysis of the linkages between perception of job autonomy practice and job satisfaction, in AEROS.

The results on the connection between perception of job autonomy and job satisfaction in AEROS are predominantly based on table 8.44. It appears that perception of high levels of job autonomy can impact the job satisfaction of informants in AEROS. The data indicates that perception of high degrees of job autonomy seems to enhance the job satisfaction of the majority of this division’s

informants. The subsequent quote (from an AEROS informant) is an example of a verbatim statement describing a link between perception of job autonomy and job satisfaction (this quote was assigned the code: 'Perception of high levels of job autonomy enhances job satisfaction'):

'Maybe my job autonomy is one of the chief contributors to my job satisfaction'. (Knowledge worker AEROS 8, age 40 to less than 50, PhD, 15 to less than 20 years of work experience).

These results on perception of the job autonomy practice and job satisfaction might be explained by the common themes in the data pointing that, AEROS informants see job autonomy as a main job aspiration. These common themes resonate with earlier research emphasizing that knowledge workers normally look for high degrees of job autonomy in their jobs (Baron and Hannan, 2002; Horwitz et al., 2003; Kinnear and Sutherland, 2000; May et al., 2002; Morris, 2000; Thompson and Heron, 2002).

8.3.6. Communication

Before presenting the results on to the connection between perception of the communication practice and, organizational commitment and job satisfaction, it is helpful to illustrate the findings pertinent to AEROS's informants' perception of this practice.

8.3.6.1. Knowledge workers' perception of communication in AEROS

The general trend in the data points that AEROS informants are quite pleased with their communication practice: in terms of constant intranet briefings and, the periodic meetings with the CEO and the monthly meetings with the division director. This division's informants have commonly stated that this sort of communication assists in informing junior employees on organizational objectives, company performance and key strategies. However, the general trend in the data indicates that AEROS informants do not usually need to depend on the communication practice to gather such type of information, as their positions of key responsibility enable them to constantly and informally talk about these insights with their division director or

with key members at their organizational level. These informants have generally mentioned that these informal channels enable them to be fairly up-to-date on their company's performance and, overall plans and strategies.

8.3.6.2. *Knowledge workers' perception of communication and organizational commitment in AEROS*

Key codes used in the analysis of the connection between AEROS informants' perception of their communication practice and their organizational commitment are defined in table 8.21. The subsequent table presents the frequency of the key codes used in the analysis of the link between perception of communication practice and organizational commitment in AEROS (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

<i>Code</i>	Frequency
<i>Link between perception of communication and organizational commitment</i>	3/38
<i>In current job position gets most information on company performance, strategy and/or goals through informal communication channels</i>	27/38

Table 8.45: Frequency of key codes used in the analysis of the linkages between perception of communication practice and organizational commitment, in AEROS.

The outcomes on the link between perception of communication and organizational commitment in AEROS are mostly reliant on table 8.45. There was little evidence in the data supporting a link between AEROS informants' perception of their communication practice and their organizational commitment. The little support for this link could be explained by the general trend in the data pointing that: at their organizational position, AEROS informants get most of the insights on their firm's performance, strategy and goals by the means of informal discussions with peers and supervisors. Accordingly, AEROS informants do not seem to need to rely on their communication practice to gather general information on their organization. The subsequent quote is an example of a verbatim statement (from an AEROS informant) describing how general company information is gathered (this quote was

allocated the code: ‘In current job position gets most information on company performance, strategy and/or goals through informal communication channels’):

I call [the communication meetings with the CEO] déjà-vu sessions...I’m a [person in a position of key responsibility] so they feed me this type of info regularly’ (Knowledge worker AEROS 9, age 40 to less than 50, BSc, 20 or more years of work experience).

8.3.6.3. Knowledge workers’ perception of communication and job satisfaction in AEROS

Main codes related to the analysis of the connection between perception of communication and job satisfaction in AEROS are delineated in table 8.23. The next table provides the frequency of the key codes used in the analysis of the connection between perception of communication and job satisfaction in AEROS (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Positive perceptions of communication practice enhances job satisfaction</i>	24/38
<i>Positive perception of communication practice enhances job satisfaction, as good top-down communication assists in the job by keeping peers and/or subordinates informed about company information</i>	21/38

Table 8.46: Frequency of key codes used in the analysis of the linkages between perception of communication practice and job satisfaction, in AEROS.

The results on the connection between perception of communication and job satisfaction in AEROS are mainly based on table 8.46. Whereas AEROS informants did not appear to often rely on their communication practice to gather insights on company performance and goals, their perception of the communication practice can still impact their job satisfaction. AEROS informants have generally indicated that their positive perception of the communication practice increases their job satisfaction. There were common themes in AEROS informants’ transcripts explaining that positive perceptions of the communication practice can increase job satisfaction, as good communication could help peers and/or subordinates in being informed on senior management views and overall company information. This might

be a prominent issue for AEROS informants as they are in positions that normally give them the responsibility over a number of co-workers. Therefore, it could be that well informed co-workers could assist AEROS informants in completing their tasks. The next quote is an example of a verbatim statement (from an AEROS informant) explaining the connection between perception of communication and job satisfaction (this quote was allocated the code: 'Positive perception of communication practice enhances job satisfaction, as good top-down communication assists in the job by keeping peers and/or subordinates informed about company information'):

'Overall it impacts my job satisfaction, because as a [manager] my role is partly to notify my team of any changes in strategies or policies and so I think the intranet helps it helps keeping the guys up-to-date with this you know with the latest corporate news' (Knowledge worker AEROS 10, age 40 to less than 50, MEng, 20 or more years of work experience).

8.3.7. Training

In order to assist in the understanding of the connection between perception of training and, organizational commitment and job satisfaction, the next subsection presents AEROS informants' perception of their training practice.

8.3.7.1. Knowledge workers' perception of training in AEROS

Slightly less than 68% of informants in AEROS have mentioned that they are satisfied with the training courses that are offered by the 'HITEC University'. Informants in this division have generally related their satisfaction with the training to the advantages that such training can have on some new entrants into their division, and sometimes to the 'soft skill' courses that could assist these informants in performing their jobs. Conversely, dissatisfaction with the training practice was expressed by around 17% of AEROS informants. The reasons for this dissatisfaction were commonly related to the schedule of these courses; which are almost always offered during working hours. Nonetheless, irrespective of their feelings of satisfaction with the training practice, almost all informants in AEROS have stated that they often do not need these training courses to advance their knowledge and expertise.

8.3.7.2. Knowledge workers' perception of training and organizational commitment in AEROS

Main codes used in the analysis of the link between perception of training and organizational commitment in AEROS are defined in table 8.25. The following table presents the frequency of the key codes used in the analysis of the connection between perception of training and organizational commitment in AEROS (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Link between perception of training and organizational commitment</i>	0/38
<i>Do not need training courses to enhance knowledge and skills</i>	36/38

Table 8.47: Frequency of key codes used in the analysis of the linkages between perception of training practice and organizational commitment, in AEROS.

The results on the connection between perception of training and organizational commitment in AEROS are mostly reliant on table 8.47. There were no signs in the data supporting a link between AEROS informants' perception of their training practice and their organizational commitment. This could be explained by common themes from AEROS informants, indicating that they do not need their training courses to enhance their skills and knowledge. The next quote is an example of a verbatim statement (from an AEROS informant) describing the reliance on training practice (this quote was allocated the code: 'Do not need training course to enhance knowledge and skills'):

[I don't need the training courses] because with my experience and degrees I don't see [the training courses] as a significant learning resource' (Knowledge worker AEROS 11, age 40 to less than 50, MBA, 20 or more years of work experience).

The findings from AEROS fall in line with earlier research on knowledge workers. Previous studies have pointed that this employee group generally does not seek to advance its knowledge and skills through training programs (May et al., 2002; Purcell et al, 2009).

8.3.7.3. Knowledge workers' perception of training and job satisfaction in AEROS

Key codes pertinent to the analysis of the link between AEROS informants' perception of training and their job satisfaction are defined in table 8.27. The following table provides the frequency of the key codes used in the analysis of the connection between perception of training practice and job satisfaction in AEROS (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Link between perception of training and job satisfaction</i>	1/38
<i>Do not need training courses to enhance knowledge and skills</i>	36/38

Table 8.48: Frequency of key codes used in the analysis of the linkages between perception of training practice and job satisfaction, in AEROS.

The results on the link between perception of training and job satisfaction in AEROS are mostly based on table 8.48. Similar to the findings on organizational commitment, there were almost no signs in the data pointing towards a link between AEROS informants' perception of their training practice and their job satisfaction. This as well, might be explained by common themes indicating that AEROS informants do not usually need their training practice to develop their skills and knowledge (Horwitz et al., 2003; May et al., 2002).

8.3.8. Employee Selection

The following subsection presents AEROS informants' perception of their selection practice, in an attempt to help understanding the connection between their perception of the selection practice and, their organizational commitment and job satisfaction.

8.3.8.1. Knowledge workers' perception of selection in AEROS

Around 62% of informants in AEROS have stated that they were satisfied with their employee selection practice. This division's informants have commonly mentioned

that AEROS has a well established and rigorous interviewing process, through which candidates' knowledge and capabilities are extensively screened by different interviewing panels.

8.3.8.2. Knowledge workers' perception of selection and organizational commitment in AEROS

A key code used in the analysis of the link between perception of selection and AEROS informants' organizational commitment is defined in table 8.29. The next table presents the frequency of the key code used in the analysis of the link between AEROS informants' perception of selection and their organizational commitment (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Link between perception of selection and organizational commitment</i>	2/38

Table 8.49: Frequency of key code used in the analysis of the linkages between perception of selection practice and organizational commitment, in AEROS.

The link between perception of selection and organizational commitment in AEROS was predominantly based on table 8.49. While previous research indicates that the selection of high quality workers could be a prominent factor for knowledge intensive firms (Baron and Hannan, 2002), there were little signs in the data supporting a connection between AEROS informants' perception of their selection practice and their organizational commitment. There were no apparent explanations in the data for this finding, and earlier studies do not appear to offer clear views pertinent to the influence of the selection practice on knowledge workers (Horwitz et al., 2003).

8.3.8.3. Knowledge workers' perception of selection and job satisfaction in AEROS

A main code used in the analysis of the link between AEROS informants' perception of selection and their job satisfaction is delineated in table 8.31. The subsequent table provides the frequency of this key code (i.e. the number of informants who

have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Link between perception of selection and job satisfaction</i>	2/38

Table 8.50: Frequency of key code used in the analysis of the linkages between perception of selection practice and job satisfaction, in AEROS.

The connection between perception of selection and job satisfaction in AEROS is mostly based on table 8.50. Again, whereas the selection practice was highlighted by previous research as being a key element for KIFs (Baron and Hannan, 2002), there was little evidence supporting a link between AEROS informants' perception of their selection practice and their job satisfaction. Moreover, there were no clear explanations in the data for this result.

8.4. Conclusion

For each of the studied cases, this chapter has presented the results related to the interconnection between informants' perception of HR practices and, their organizational commitment and job satisfaction. The next chapter will subsequently provide for each of SAND and AEROS, the findings pertinent to the role of contextual factors (human, social and organizational capital) within the linkages between informants' perception of HR practices and, their organizational commitment and job satisfaction.

CHAPTER 9

The role of human, social and organizational capital in the interconnections between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction

9.1. Introduction

The previous chapter presented the results for the interconnections between informants' perception of HR practices and, their organizational commitment and job satisfaction (in each of SAND and AEROS). Subsequently, this chapter provides the within-case analysis of the findings pertinent to the role of human, social and organizational capital in the linkages between informants' perception of HR practices and, their organizational commitment and job satisfaction (for both divisions). Some of the results that are presented in this chapter are based on the first interview phase, and some other results are based on both the first and second interview rounds. Similar to chapter 8, main codes used in the analysis (along with their definitions) are illustrated in tables throughout the presentation of findings in this chapter. These codes generally correspond to patterns, themes or relationships between theoretical concepts. Since the main conclusions in this chapter were obtained using tables that encompass the frequency of different codes, tables that present the frequency of key codes are also provided throughout this chapter. As indicated in chapter 8, frequencies of codes were attained based on summary tables that were built after assigning different codes to corresponding verbatim statements (within the data records for each case). Firstly, tables were created and presented as 'informant-by-code' tables, in order to help the researcher in analyzing the views given by different informants (Miles and Huberman, 1994). Secondly, in order to further condense the data and help in reaching conclusions, the 'informant-by-codes' tables were used to obtain the frequency for each code (i.e. for each code: the number of informants who have this code present in their interview transcript against the overall number of informants).

As mentioned in the above paragraph, some of the findings in this chapter were analyzed based on the first interview round and some other results were

analyzed based on both the first and second interview phases. The findings that were analyzed based on both rounds of interviews, dealt with issues that were not directly addressed by the researcher in the first interview round, but mostly in the second interview phase. Accordingly, when results that are presented in this chapter were analyzed based on the two rounds of interviews, the frequency of key codes related to these findings include the frequency of codes based on all informants (denoted in the tables as ‘frequency from both rounds’) as well as the frequency of codes found in the second interview phase (marked in the tables as ‘frequency from second round’). The ‘frequency from both rounds’ is the frequency of a code amongst all interviewed informants in one case; whether these informants were interviewed in round one only or both rounds. As for the ‘frequency from second round’ it is the frequency of a code amongst informants from the second round only. This distinction can help the reader in seeing the occurrence of a certain code over all interviewed informants, as well as the frequency of this code in the second interviewing phase; when more direct and focused questions pertinent to this code were asked. It is important to note that even though a certain code could have been present in the two interview transcripts of an informant (who contributed to the two rounds of interviews), the ‘frequency from both rounds’ for this code does not account twice for this informant.

Following this thesis analytical framework, this chapter attempts to explain how informants’ perception of HR practices can impact their division’s human, social and organizational capital and in turn, how these contextual variables can influence informants’ organizational commitment and job satisfaction. Accordingly, for each of SAND and AEROS, the chapter starts by presenting the analysis of the findings pertinent to the influence of informants’ perception of HR practices on their division’s human, social and organizational capital and then, provides the analysis of the results related to the influence of these forms of capital on informants’ organizational commitment and job satisfaction.

9.2. The role of human, social and organizational capital in the interconnections between perception of HR practices and, organizational commitment and job satisfaction: SAND

The findings indicate that SAND's informants' perceptions of selection, compensation and job security could indirectly enhance their organizational commitment and job satisfaction, through social capital – as these perceptions could contribute to the development of aspects of social capital in SAND and the features of social capital in this division can increase SAND's informants' attitudes. As well, it appears that this division's informants' perception of career opportunities can indirectly enhance their organizational commitment and job satisfaction – as this perception could influence this division's human capital, which in turn could impact SAND's social capital. Furthermore, while limited, there were evidence in the data pointing that the indirect impact of perception of HR practices on attitudes, through forms of capital, can be affected by the forms of knowledge that SAND informants' possess and mainly, which of these forms of knowledge these employees need to rely on their organization to advance.

The function of human, social and organizational capital in the interconnections between SAND's informants' perception of HR practices and, organizational commitment and job satisfaction is presented according to main themes from the data. These themes are related to: the impact of perception of HR practices on human, social and organizational capital, and, the impact of human, social and organizational capital on organizational commitment and job satisfaction.

9.2.1. The impact of perception of HR practices on human, social and organizational capital: SAND

The following subsections present the findings related to the influence of SAND's informants' perception of HR practices on their division's human, social and organizational capital.

9.2.1.1. The impact of perception of HR practices on human capital: SAND

The next table presents a key code used in the analysis of the linkages between perception of HR practices and human capital in SAND.

Code	Definition
<i>Perception of career opportunities as facilitating movements between different positions persuades worker to change position</i>	Describes that perception of the career opportunities practice (in terms of facilitating movements between job positions) persuades worker to seek movements into new positions.

Table 9.1: Key code used in the analysis of the interconnections between perception of HR practices and human capital in SAND.

The following table provides the frequency of the key code used in the analysis of the connection between perception of HR practices and human capital in SAND.

Code	Frequency
<i>Perception of career opportunities as facilitating movements between different positions persuades worker to change position</i>	37/68

Table 9.2: Frequency of a key code used in the analysis of the interconnections between perception of HR practices and human capital in SAND.

From the HR practices that are present inside SAND, the data points that this division's informants' perception of their career opportunities practice can impact SAND's human capital (there was almost no evidence in the data indicating the presence of linkages between perception of other HR practices and human capital in this division). The findings on the link between perception of career opportunities and human capital in SAND are mainly based on table 9.2. Common themes from SAND's informants indicate that their perception of their career opportunities practice (in terms of realizing that their firm is facilitating their movements between job positions) has persuaded and encouraged them to seek movements into new positions. The following quote is an example of a verbatim statement (from an informant in SAND) illustrating how perception of career opportunities can encourage the worker to seek movements into new positions (this quote was assigned the code: 'Perception of career opportunities as facilitating movements between different positions persuades worker to change position'):

‘There is great support for learning people have the freedom to choose their courses and to go into various positions and I feel everyone takes advantage of that you would be silly not to try different positions if they are offered to you on a silver plate’ (Knowledge worker SAND 11, age 40 to less than 50, BSc, 15 to less than 20 years of work experience).

As indicated in chapter 8, movements between job positions seem to help SAND’s informants to develop their knowledge and skills. Therefore, as informants’ perception of career opportunities seems to persuade them to move into new positions, such perception can have a role in enhancing their knowledge and capabilities. In other words, it seems that SAND’s informants’ perception of career opportunities can help developing this division’s human capital. While there is not enough research evidence on the influence of knowledge workers’ perception of HR practices on human capital, scholars have claimed that this practice might help developing and enhancing workers’ knowledge and capabilities (Horwitz, 2003; Koch and McGrath, 1996). In parallel, it is worth mentioning that while this division’s informants commonly believe that their selection practice has brought candidates who possess a high quality of knowledge and/or experience into SAND, it appears from the data that it is the actual presence of this practice that is more likely to enhance the quality of SAND’s human capital rather than informants’ perception of their selection practice.

9.2.1.2. The impact of perception of HR practices on social capital: SAND

The data indicates that SAND’s informants’ perceptions of selection, job security and compensation can contribute to the development of aspects of social capital inside this division (there was nearly no evidence in the data pointing towards linkages between perception of other HR practices and social capital in SAND). The following table presents key codes used in the analysis of the linkages between perception of HR practices and social capital.

Code	Definition
<i>Perception of selection practice, as putting high emphasis on candidates' values, enhances feelings of resilient trust towards division's workforce</i>	Describes that perception of selection practice, as one that puts high emphasis on candidates' values, enhances her or his belief in SAND's workforce's values and/or integrity.
<i>Perception of high levels of job security enhances willingness to share common goals with employees inside and across teams</i>	Describes that perception of high levels of job security enhances worker's willingness to share common goals with co-workers inside her/his team as well as with employees across teams inside the division.
<i>Perception of high levels of job security can impact willingness to share non-eminent and/or long-term goals, as this perception promotes feelings that worker will be employed in firm for long periods of time</i>	Describes that perception of high levels of job security can impact a worker's willingness to share non-eminent and/or long-term common goals, as this perception promotes feelings that worker will be employed in firm for long periods of time.
<i>Perception of compensation practice, as linking employee remuneration with overall company profits, enhances cooperation with co-workers inside and across teams</i>	Describes that perception of compensation practice, as linking employee remuneration with overall company profits, can enhance worker's cooperation with co-workers inside the employee's team(s) and with workers across teams in the division.

Table 9.3: Key codes used in the analysis of the interconnections between perception of HR practices and social capital in SAND.

The next table provides the frequency of the key codes used in the analysis of the linkages between SAND informants' perception of HR practices and social capital in this division (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Perception of selection practice, as putting high emphasis on candidates' values, enhances feelings of resilient trust towards division's workforce</i>	38/68(frequency from both rounds) 10/12 (frequency from second round)
<i>Perception of high levels of job security enhances willingness to share common goals with employees inside and across teams</i>	36/68(frequency from both rounds) 11/12(frequency from second round)
<i>Perception of high levels of job security can impact willingness to share non-eminant and/or long-term goals, as this perception promotes feelings that worker will be employed in firm for long periods of time</i>	12/68 (frequency from both rounds) 9/12(frequency from second round)
<i>Perception of compensation practice, as linking employee remuneration with overall company profits, enhances cooperation with co-workers inside and across teams</i>	45/68(frequency from both rounds) 12/12(frequency from second round)

Table 9.4: Frequency of key codes used in the analysis of the interconnections between perception of HR practices and social capital in SAND.

The findings presented in the next paragraphs of this subsection are mainly based on table 9.4. The data indicates that SAND's informants' perception of their selection practice can help building social capital in this division. In slightly more than half of informants' transcripts in SAND it was found that perception of high emphasis on candidates' values in the selection practice can enhance a workers' belief in SAND's workforce's integrity and/or values – this theme was present in the transcripts of the vast majority of informants in the second round of interviews, where more direct questions on the impact of perception of HR practices on social capital were addressed. The following quote (from a SAND informant) is an example of a verbatim statement illustrating the link between perception of selection and social capital (this quote was allocated the code: 'Perception of selection practice, as putting high emphasis on candidates' values, enhances feelings of resilient trust towards SAND's workforce'):

'I don't have to personally know a colleague in order to trust him cause I know that we put a huge weight on values in interviews we are extremely strict on this' (Knowledge worker SAND 12, age more than 30 to less than 40, BSc, 10 to less than 15 years of work experience).

This finding on the possible impact of the selection practice on social capital resonates with scholars' claims that selection practices that focus on candidates' norms and values can help building features of social capital in business entities (Bigley and Pearce, 1998; Leana and Van Buren, 1999; McKnight et al., 1998).

Moreover, the data points that SAND's informants' perception of job security can contribute to the development of social capital in this division. In a little more than half of this division's informants' transcripts it was found that perception of high levels of job security can enhance a worker's willingness to share common goals with co-workers inside and across teams – this theme was present in the overwhelming majority of transcripts from the second interview phase, where more direct questions on the impact of perception of HR practices on social capital were asked. There were some indications in the data (mostly from the second interview phase) that might perhaps provide some explanations for this finding. These themes explain that perception of high levels of job security might encourage an employee to mainly share non-urgent and/or relatively long-term goals with her/his co-workers, as such perception can make the worker feel that she/he can be employed in the firm for a long period of time. The next quote is a verbatim statement (from a SAND informant) describing a link between perception of job security and social capital (this quote was allocated the code: 'Perception of high levels of job security enhances willingness to share common goals with employees inside and across teams'):

'I think our team structure has quite a bit to do with [the presence of many employees with common goals] but also you need to keep in mind that most people here including myself know that we can spend a lifetime in [SAND] and that is a big contributing factor as well...yeah yeah for sure job security has encouraged me to share common goals...both [in my team and across teams] (Knowledge worker SAND 13, age 40 to less than 50, MEng, more than 20 years of work experience).

This finding resonates with previous studies on social capital, which have indicated that job security can help building long-term contracts between organizational

members, which could assist in promoting social capital (Dyer and Noboeka, 2000; Leana and Van Buren, 1999).

The data indicates that SAND's informants' perception of their compensation practice can also help building social capital in this division. Perception of compensation practice, as linking employee remuneration with overall company profits, seems to encourage the majority of SAND's informants to cooperate with co-workers inside and across their teams; this theme was present in all transcripts from the second interview phase, where more direct questions on the impact of perception of HR practices on social capital were addressed. Therefore, as SAND's informants' perception of compensation can help promoting cooperation between workers (inside and across teams), it could help promoting associability both inside and across teams in this division. The following quote is an example of a verbatim statement (from an informant in SAND) illustrating the link between perception of compensation and social capital (this quote was assigned the code: 'Perception of compensation practice, as linking employee remuneration with overall company profits, enhances cooperation with co-workers inside and across teams'):

'My remuneration [is an HR practice that encourages me to collaborate with co-workers inside and outside my team]...because remunerations are distributed in a pretty smart way they ensure that [SAND's] people have a mutual interest and so this makes people more collaborative' (Knowledge worker SAND 5, age 40 to less than 50, BEng, 20 or more years of work experience).

In relation to earlier research, compensation practices that reward employees' performance with overall company profits were described by scholars as having a likely role in influencing collective work inside organizations (Ichniowski et al., 1997; Leana and Van Buren, 1999).

9.2.1.3. The impact of perception of HR practices on organizational capital: SAND

The subsequent table presents a key code used in the analysis of the connection between perception of HR practices and organizational capital, in SAND.

Code	Definition
<i>Perception of compensation encourages worker to contribute to manuals in division, as worker feels that such contribution could affect the decisions pertinent to her/his participation in LTIP</i>	Describes that perception of compensation encourages worker to contribute to manuals in division, as worker perceives that such contribution could affect the decisions pertinent to her/his participation in LTIP.

Table 9.5: Key codes used in the analysis of the interconnections between perception of HR practices and organizational capital in SAND.

The next table provides the frequency of the key code used in the analysis of the link between perception of HR practices and organizational capital in SAND (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Perception of compensation encourages worker to contribute to the manuals in division, as worker feels that such contribution could affect the decisions pertinent to her/his participation in LTIP</i>	29/68(frequency from both rounds) 11/12(frequency from second round)

Table 9.6: Frequency of a key code used in the analysis of the interconnections between perception of HR practices and organizational capital in SAND.

In examining the linkages between perception of HR practices and organizational capital in SAND, the data indicates that SAND's informants' perception of their compensation practice might have an impact on their division's organizational capital (there were almost no indications in the data pointing towards a connection between perception of other HR practices and organizational capital in SAND). The results on the link between perception of compensation and organizational capital in SAND are predominantly based on table 9.6. The data indicates that SAND's informants' perception of the long-term incentive plan component of their compensation can incentivize them to contribute towards their division's manuals – as they view that such contributions could affect the decisions related to their participation in the LTIP. While there were slightly less than half of all informants in SAND who had this theme present in their interview transcript, this

theme was in existence in the overwhelming majority of informants' records from the second interview round (when more direct questions on the impact of perception of HR practices on organizational capital were asked). The next quote is an example of a verbatim statement (from a SAND informant), describing the link between perception of compensation and organizational capital (this quote was allocated the code: 'Perception of compensation encourages worker to contribute to manuals in the division, as worker feels that such contribution could affect the decisions pertinent to her/his participation in LTIP'):

'I've written a couple of coding handbooks with my colleagues... I sense that they look at how often I land a hand in like knowledge delivery when they propose my [long-term incentive] plan so I feel that I'm somehow responsible for arranging handbooks for like systems' codes, and I try to participate in training delivery as much as possible' (Knowledge worker SAND 14, age 50 to less than 60, BEng, 20 or more years of work experience).

The results on perception of compensation and organizational capital in SAND fall in line with earlier studies highlighting that HR practices that encourage employees to build up and contribute towards their firm's processes databases or manuals, can assist in enhancing organizational capital (Hansen et al., 1999; Youndt and Snell, 2004; Youndt et al., 2004).

9.2.2. The impact of human, social and organizational capital on, organizational commitment and job satisfaction: SAND

The following subsections present the findings related to the influence of human, social and organizational capital on SAND's informants' organizational commitment and job satisfaction.

9.2.2.1 The impact of social capital on organizational commitment: SAND

The subsequent table presents main codes used in the analysis of the connection between social capital and SAND's informants' organizational commitment.

Code	Definition
<i>Division's features of social capital enhance organizational commitment</i>	Describes that characteristics of social capital in division enhance organizational commitment ³ .
<i>Division's features of social capital enhance organizational commitment, as they help enhancing knowledge and skills</i>	Explains that division's features of social capital enhance organizational commitment as they help worker in developing her/his knowledge and skills.
<i>Mostly needs knowledge of software codes and, know-how in understanding the customer context, know-how in dealing with innovative complex solutions and/or ability to have strong critical judgments</i>	Describes that worker mostly needs knowledge related to software codes and programming languages, as well as, know-how in understanding the customer context, know-how in dealing with innovative complex solutions and/or ability to have strong critical judgments.
<i>Does not need to rely on firm to advance knowledge of software codes, as can be acquired by reading books easily found outside the organization</i>	Describes that worker does not need to depend on her/his firm to advance knowledge of software codes and programming languages as she/he can learn them by reading books that are easily available on the market.
<i>Needs to rely on firm to advance know-how in understanding the customer context, know-how in dealing with innovative complex solutions and/or ability to have strong critical judgments – as these are best developed through exchanges with co-workers</i>	Describes that worker needs to depend on her/his firm to advance her/his know-how in understanding the customer context, know-how in dealing with innovative complex solutions and/or ability to have strong critical judgments; as these are best developed through exchanges with co-workers.

Table 9.7: Key codes used in the analysis of the interconnection between social capital and organizational commitment, in SAND.

The next table presents the frequency of the key codes used in the analysis of the links between social capital and organizational commitment in SAND (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

³ Organizational commitment in the codes presented in this chapter is defined based on Gould-Williams (2003).

Code	Frequency
<i>Division's features of social capital enhance organizational commitment</i>	56/68
<i>Division's features of social capital enhance organizational commitment, as they help enhancing knowledge and skills</i>	52/68
<i>Mostly needs knowledge of software codes and, know-how in understanding the customer context, know-how in dealing with innovative complex solutions and/or ability to have strong critical judgments</i>	17/68(frequency from both rounds) 12/12(frequency from second round)
<i>Does not need to rely on firm to advance knowledge of software codes, as can be acquired by reading books easily found outside the organization</i>	14/68(frequency from both rounds) 12/12(frequency from second round)
<i>Needs to rely on firm to advance know-how in understanding the customer context, know-how in dealing with innovative complex solutions and/or ability to have strong critical judgments, as these are best developed through exchanges with co-workers</i>	16/68(frequency from both rounds) 11/12(frequency from second round)

Table 9.8: Frequency of key codes used in the analysis of the interconnection between social capital and organizational commitment, in SAND.

The findings on the impact of social capital on SAND's informants' organizational commitment are mostly based on table 9.8. The data indicates that there is a likely connection between SAND's social capital and this division's informants' organizational commitment. It seems that the features of social capital that are present in this division can enhance the organizational commitment of the majority of SAND's informants. This result resonates with Leana and Van Buren (1999) claim, pointing that the existence of associability and trust can help increase workers' organizational commitment. The following quote is an example of a verbatim statement (from an informant in SAND) describing a link between social capital and organizational commitment (this quote was assigned the code: 'Division's features of social capital enhance organizational commitment'):

'No there is no individual targets in here my colleagues and I work side-by-side for the same objectives ...yeah I strongly believe this makes me feel part of the company as I told you there is no individual targets in [SAND] we sail in the same boat'

(Knowledge worker SAND 15, age 40 to less than 50, BSc, 20 or more years of work experience).

Common themes from SAND's informants indicate that the central reason behind the likely impact of social capital on their organizational commitment is related to the learning and knowledge development prospects that the characteristics of this construct in this division seem to offer. Previous research has emphasized that the presence of collective work and strong collaboration between workers in an organization as well as, the existence of trust in employee relationships can help enhancing workers' knowledge and capabilities (Dyer and Nobeoka, 2000; Kang et al., 2007; Leana and Van Buren, 1999). Moreover, earlier studies have posited that when workers view that their company is providing them with opportunities for knowledge growth this could lead to employees reciprocating in increased levels of organizational commitment (Arthur, 1994; Chang 1999, 2005; Gould-Williams, 2004; Purcell et al., 2009). Such opportunities could be of particular importance for knowledge workers, as earlier studies have often highlighted the significance of knowledge developmental prospects for this employee group (Alvesson, 1993; Cappelli, 1999; May et al., 2002). The following quote is an example of a verbatim statement (from an informant in SAND), explaining why the existence of trust in SAND's working relationships is a main reason behind this informant's organizational commitment (this quote was assigned the code: 'Division's features of social capital enhance organizational commitment, as they help enhancing knowledge and skills'):

'Well I think I can learn mostly from my peers really more than any other thing and I believe that trust is key for people to learn from one another you know especially in the workplace' (Knowledge worker SAND 16, age 40 to less than 50, PhD, 15 to less than 20 years of work experience).

There are findings (even though limited), mainly from the second round of interviews, that appear to provide some further explanations pertinent to the impact of social capital on SAND's informants' organizational commitment. These results point that the influence of social capital on SAND's informants' organizational commitment might be further explained by the forms of knowledge and/or abilities that these informants need in their jobs, and which of these forms of knowledge and/or abilities these informants need to rely on their organization to advance. In particular, all informants from the second round of interviews have stated that, in

their type work, they often need knowledge of certain software codes and programming languages as well as, know-how in understanding the customer context, know-how in dealing with innovative complex solutions and/or ability to have strong critical judgments. These informants (from the second round) have overwhelmingly mentioned that they do not need to depend on their organization to develop their knowledge of software codes and programming languages, as these can be acquired by reading books that are rather easily available from outside the organization. Conversely, the majority of informants, from round two, have pointed that they often need to depend on their firm in developing their know-how in understanding the customer context, their know-how in dealing with innovative complex solutions and/or their ability to have strong critical judgments. These informants have generally explained that the exchange of personal viewpoints, perceptions and/or judgments with co-workers can help them develop such knowledge and abilities (i.e. know-how in understanding the customer context, ability to have strong critical thinking etc.). These types of exchanges were often described by authors as encompassing the transfer of a knowledge that is tacit in nature (Boh, 2007; Hansen et al., 1999; Johnson-Laird, 1983; Nonaka, 1994). Moreover, earlier studies claim that social capital is generally the best medium for the transfer and development of tacit knowledge (Boh, 2007; Gertler, 2003; Hansen et al., 1999; Laursen and Mahnke, 2001; Nonaka, 1994; Preece, 2003; Scheepers et al., 2004). Therefore, it seems that social capital's influence on SAND's informants' organizational commitment might not just rely on the features of this construct inside SAND but, perhaps also on the forms of knowledge and/or abilities that these employees need in their jobs – and which of these forms of knowledge and/or abilities these informants need to rely on their firm to develop.

9.2.2.2. The impact of social capital on job satisfaction: SAND

The subsequent table presents a list of key codes used in the analysis of the links between social capital and job satisfaction in SAND.

Code	Definition
<i>Division's features of social capital enhance job satisfaction</i>	Describes that division's features of social capital enhance job satisfaction ⁴ .
<i>Division's features of social capital enhance job satisfaction, as they help enhancing knowledge and skills</i>	Explains that division's features of social capital enhance job satisfaction as they help worker in developing her/his knowledge and skills.
<i>Mostly needs knowledge of software codes and, know-how in understanding the customer context, know-how in dealing with innovative complex solutions and/or ability to have strong critical judgments</i>	Describes that worker mostly needs knowledge related to software codes and programming languages, as well as, know-how in understanding the customer context, know-how in dealing with innovative complex solutions and/or ability to have strong critical judgments.
<i>Does not need to rely on firm to advance knowledge of software codes, as can be acquired by reading books easily found outside the organization</i>	Describes that worker does not need to depend on her/his firm to advance knowledge of software codes and programming languages as she/he can learn them by reading books that are easily available on the market.
<i>Needs to rely on firm to advance know-how in understanding the customer context, know-how in dealing with innovative complex solutions and/or ability to have strong critical judgments – as these are best developed through exchanges with co-workers</i>	Describes that worker needs to depend on her/his firm to advance her/his know-how in understanding the customer context, know-how in dealing with innovative complex solutions and/or ability to have strong critical judgments; as these are best developed through exchanges with co-workers.

Table 9.9: Key codes used in the analysis of the interconnection between social capital and job satisfaction, in SAND.

The next table presents the frequency of the key codes used in the analysis of the link between social capital and job satisfaction in SAND (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

⁴ Job satisfaction in codes defined in this chapter is delineated based on Hackman and Oldham's (1975).

Code	Frequency
<i>Division's features of social capital enhance job satisfaction</i>	51/68
<i>Division's features of social capital enhance job satisfaction, as they help enhancing knowledge and skills</i>	43/68
<i>Mostly needs knowledge of software codes and, know-how in understanding the customer context, know-how in dealing with innovative complex solutions and/or ability to have strong critical judgments</i>	17/68(frequency from both rounds) 12/12(from second round)
<i>Does not need to rely on firm to advance knowledge of software codes, as can be acquired by reading books easily found outside the organization</i>	14/68(frequency from both rounds) 12/12(from second round)
<i>Needs to rely on firm to advance know-how in understanding the customer context, know-how in dealing with innovative complex solutions and/or ability to have strong critical judgments – as these are best developed through exchanges with co-workers</i>	16/68(frequency from both rounds) 11/12(from second round)

Table 9.10: Frequency of key codes used in the analysis of the interconnection between social capital and job satisfaction, in SAND.

The findings on the link between social capital and job satisfaction in SAND are mainly reliant on table 9.10. The data points that the characteristics of social capital in SAND can influence this division's informants' job satisfaction. The features of social capital that are in existence in SAND appear to increase the majority of informants' job satisfaction. The most common explanations given for this linkage by SAND's informants indicate that aspects of social capital in this division can assist them in developing their knowledge and skills; which is described by scholars as a key job aspiration for knowledge workers (Alvesson, 1993; Cappelli, 1999; May et al., 2002). As indicated earlier, authors have mentioned that the existence of collective work and strong collaboration between employees in a firm as well as, the presence of trust in workers' relationships can help enhancing employees' knowledge and capabilities (Dyer and Nobeoka, 2000; Kang et al., 2007; Leana and Van Buren, 1999; Purcell et al., 2009). The next quote is a verbatim statement (from an informant in SAND) illustrating a connection between social

capital and job satisfaction (this quote was assigned the code: ‘Division’s features of social capital enhance job satisfaction’):

‘There is continuous cooperation and exchange throughout our assignments ...yeah definitely this makes me very satisfied in my job’ (Knowledge worker SAND 17, age 40 to less than 50, BEng, 20 or more years of work experience).

Again, there are indications (while limited), mostly from the second round of interviews that seem to provide further insights on the impact of social capital on SAND’s informants’ job satisfaction. As discussed in the previous subsection, it might be that social capital helps enhancing the forms of knowledge that SAND’s informants need to rely on their organization to advance. Accordingly, it appears that the impact of social capital on SAND’s informants’ job satisfaction might be further explained by the forms of knowledge that these informants need in their jobs, and which of these forms of knowledge and/or abilities they need to depend on their firm to develop.

9.2.2.3. The impact of organizational capital on organizational commitment and job satisfaction: SAND

The next table presents key codes used in the analysis of the links between organizational capital and, SAND’s informants’ organizational commitment and job satisfaction.

Code	Definition
<i>Features of organizational capital in division enhance organizational commitment</i>	Describes that division’s features of organizational capital enhance worker’s organizational commitment.
<i>Features of organizational capital in division decrease organizational commitment</i>	Describes that division’s features of organizational capital decrease worker’s organizational commitment.
<i>Features of organizational capital in division enhance job satisfaction</i>	Describes that division’s features of organizational capital enhance worker’s job satisfaction.
<i>Features of organizational capital in division decrease job satisfaction</i>	Describes that division’s features of organizational capital decrease job satisfaction.

Code (continued)	Definition
<i>Does not need to rely on elements of organizational capital to advance knowledge and skills</i>	Describes that worker does not need to rely on elements of organizational capital to advance her/his knowledge and/or skills.
<i>Mostly needs knowledge of software codes and, know-how in understanding the customer context, know-how in dealing with innovative complex solutions and/or ability to have strong critical judgments</i>	Describes that worker mostly needs knowledge related to software codes and programming languages, as well as, know-how in understanding the customer context, know-how in dealing with innovative complex solutions and/or ability to have strong critical judgments.
<i>Does not need to rely on firm to advance knowledge of software codes, as can be acquired by reading books easily found outside the organization</i>	Describes that worker does not need to depend on her/his firm to advance knowledge of software codes and programming languages as she/he can learn them by reading books that are easily available on the market.
<i>Needs to rely on firm to advance know-how in understanding the customer context, know-how in dealing with innovative complex solutions and/or ability to have strong critical judgments – as these are best developed through exchanges with co-workers</i>	Describes that worker needs to depend on her/his firm to advance her/his know-how in understanding the customer context, know-how in dealing with innovative complex solutions and/or ability to have strong critical judgments; as these are best developed through exchanges with co-workers.

Table 9.11: Key codes used in the analysis of the interconnections between organizational capital and, organizational commitment and job satisfaction, in SAND.

The following table presents the frequency of the key codes used in the analysis of the links between organizational capital and, SAND's informants' organizational commitment and job satisfaction (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Features of organizational capital in division enhance organizational commitment</i>	0/68
<i>Features of organizational capital in division decrease organizational commitment</i>	2/68
<i>Features of organizational capital in division enhance job satisfaction</i>	0/68
<i>Features of organizational capital in division decrease job satisfaction</i>	2/68
<i>Does not need to rely on elements of organizational capital to advance knowledge and skills</i>	43/68
<i>Mostly needs knowledge of software codes and, know-how in understanding the customer context, know-how in dealing with innovative complex solutions and/or ability to have strong critical judgments</i>	17/68(frequency from both rounds) 12/12(frequency from second round)
<i>Does not need to rely on firm to advance knowledge of software codes, as can be acquired by reading books easily found outside the organization</i>	14/68(frequency from both rounds) 12/12(frequency from second round)
<i>Needs to rely on firm to advance their know-how in understanding the customer context, know-how in dealing with innovative complex solutions and/or ability to have strong critical judgments – as these are best developed through exchanges with co-workers</i>	16/68(frequency from both rounds) 11/12(frequency from second round)

Table 9.12: Frequency of key codes used in the analysis of the interconnections between organizational capital and, organizational commitment and job satisfaction, in SAND.

The findings on the connection between organizational capital and, organizational commitment and job satisfaction in SAND are mainly based on table 9.12. There were little indications in the data pointing towards a connection between SAND's organizational capital (characterized by the existence of a number of software manuals and the lack of procedures, databases and patents for storing knowledge) and this division's informants' organizational commitment and job satisfaction. Common themes from SAND's informants indicate that they do not normally need to rely on features of organizational capital to acquire and develop their knowledge and/or abilities. These themes could perhaps explain why SAND's

manuals do not seem to influence this division's informants' work attitudes (Arthur, 1994; Chang 1999, 2005; Gould-Williams, 2004; Locke, 1976). The following quote is an example of a verbatim statement (from an informant in SAND) illustrating this informant view on elements of organizational capital (this quote was assigned the code: 'Does not need to rely on elements of organizational capital to advance knowledge and skills'):

'No I do update myself with the latest languages but I don't believe that, at least for me I don't believe I have to use [my company's] documents for that matter' (Knowledge worker SAND 18, age 50 to less than 60, BEng, more than 20 years of work experience).

There were indications (even though limited), mainly from the second round of interviews, that seem to provide further explanations for the apparent lack of impact of organizational capital on SAND's informants' organizational commitment and job satisfaction. These indications point that the influence of organizational capital on SAND's informants' attitudes appears to depend on the forms of knowledge that these employees need in their jobs and, the extent to which they need to rely on their organization to advance these forms of knowledge. As indicated in the two previous subsections, all informants from the second round of interviews have mentioned that, in their nature of work, they usually need knowledge pertinent to particular software codes and programming languages as well as, know-how in understanding the customer context, know-how in dealing with innovative complex solutions and/or ability to have strong critical judgments. These informants (from the second round of interviews) have stated that they do not need to rely on their firm to advance the knowledge of software codes and programming languages, as these can be rather advanced through readings of software books that are easily available on the outside market. In opposition, the overwhelming majority of informants in SAND (from round two) have stated that they generally need to depend on their company to advance their know-how in understanding the customer context, their know-how in dealing with innovative complex solutions and/or their ability to have strong critical judgments. These informants have commonly explained that the transfer of viewpoints, judgments and perceptions with co-workers assist them in developing such forms of knowledge and abilities (i.e. know-how in understanding the customer context, ability to have strong critical thinking etc.). As described

earlier, previous research points that the exchange of this type of information (personal viewpoints, judgments and perceptions) is normally most efficiently made through the transfer of tacit knowledge (Boh, 2007; Gertler, 2003; Hansen et al., 1999; Laursen and Mahnke, 2001; Nonaka, 1994; Preece, 2003; Scheepers et al., 2004). As well, earlier research indicates that the transfer of tacit knowledge can best occur through social capital rather than codified documentation (such as manuals, databases and procedures; in other words elements of organizational capital) (Boh, 2007; Gertler, 2003; Hansen et al., 1999; Laursen and Mahnke, 2001; Nonaka, 1994; Preece, 2003; Scheepers et al., 2004). Therefore, it could be argued that elements of organizational capital (such as manuals, databases and procedures) might not have an impact on SAND's informants' attitudes, due to the forms of knowledge that these informants need in their jobs and which of these forms of knowledge these informants need to rely on their firm to develop.

9.2.2.4. The impact of human capital on organizational commitment and job satisfaction: SAND

The data does not seem to lead toward the conclusion that SAND's human capital is likely to be directly connected to this division's informants' attitudes. As described in the two preceding subsections, SAND's social capital was generally a reason behind this group's informants' job satisfaction and organizational commitment – as it seems to help supporting informants' knowledge development by promoting information exchange between workers in this division. Nonetheless, while this group's informants have commonly stated that the features of social relationships between individuals in SAND can impact their attitudes, there were only few statements pointing towards the sole presence of human capital (i.e. the sole existence of skilled and knowledgeable individuals) as a cause for commitment and/or job satisfaction. Accordingly, it appears that it is the features of the relationships between individuals rather than individuals' knowledge that was generally mentioned by SAND's informants as being linked to their work attitudes. Perhaps the differences between the nature of social and human capital constructs – in terms of the former being more embedded within the firm and the latter more associated with individuals (Subramaniam and Youndt, 2005; Youndt et al., 2004) – could mean that SAND's informants might be portraying their firm's developmental support through social capital and not through human capital.

However, a close examination of the data seems to indicate that this division's human capital can indirectly influence SAND's informants' attitudes, through its likely role in developing social capital in this division. The following table presents key codes used in the analysis of the linkages between human and social capital, in SAND.

Code	Definition
<i>The firm-specific knowledge and experience that many workers in SAND have, has facilitated collaborative work in this division</i>	Describes that the firm-specific knowledge and experience that many workers in SAND have, has facilitated collaborative work in this division.
<i>The firm-specific knowledge and experience that many workers in SAND have has facilitated the understanding of common goals in this division</i>	Describes that the firm-specific knowledge and experience that many workers in SAND have, has facilitated the understanding of common goals in SAND.

Table 9.13: Key code used in the analysis of the interconnections between human capital and, organizational commitment and job satisfaction, in SAND.

The next table presents the frequency of the key codes used in the analysis of the link between human capital and social capital in SAND (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>The firm-specific knowledge and experience that many workers in SAND have, has facilitated collaborative work in this division</i>	37/68(frequency from both rounds) 9/12(frequency from second round)
<i>The firm-specific knowledge and experience that many workers in SAND have has facilitated the understanding of common goals in this division</i>	26/68(frequency from both rounds) 10/12(frequency from second round)

Table 9.14: Frequency of key code used in the analysis of the interconnections between human capital and, organizational commitment and job satisfaction, in SAND.

The findings on the impact of human capital on SAND's social capital are mainly based on table 9.14. The data points that the features of human capital inside this division can influence its social capital. Slightly more than half of informants in SAND have pointed that the firm-specific knowledge and experience that many employees have in this division, has helped in the development of collaborative work in SAND – such a theme was found in the majority of transcripts from the second interview phase, where direct and focused questions on the impact of human capital on social capital were asked. Moreover, around 26 informants in SAND have indicated that the firm-specific knowledge and experience that many workers in SAND possess, has facilitated the understanding of common goals in this division – this theme was present in the majority of transcripts from the second round of interviews, where direct and focused questions on the impact of human capital on social capital were asked. The following quote (from an informant in SAND) is an example of a verbatim statement describing the link between SAND's human and social capital (this quote was assigned the code: 'The firm-specific knowledge and experience that many workers in SAND have has facilitated the understanding of common goals in SAND'):

'Company experience certainly contributes to my understanding of common objectives and it helps me explain objectives to others' (Knowledge worker SAND 19, age 40 to less than 50, BEng, more than 20 years of work experience).

In connection with the literature, there were indications in earlier studies pointing that firm-specific human capital can have a likely role in the development of social relationships and common understanding within business entities (Brown and Duguid, 2001, Cicourel, 1973; Kang et al., 2007).

9.3. The role of human, social and organizational capital in the interconnections between perception of HR practices and organizational commitment and job satisfaction: AEROS

The results indicate that AEROS informants' perception of compensation can indirectly enhance their organizational commitment and job satisfaction, through organizational capital – as this perception could contribute to the development of organizational capital in AEROS and the characteristics of organizational capital in this division can increase its informants' attitudes. As well, it appears that AEROS

informants' perception of career opportunities can indirectly increase their organizational commitment and job satisfaction – as this perception can impact this division's human capital, which in turn, can influence AEROS's organizational capital. Moreover, there were evidence (while limited) in the data pointing that the indirect influence of perception of HR practices on attitudes, through forms of capital, can be affected by the forms of knowledge that AEROS informants' possess and mainly, which of these forms of knowledge these workers need to depend on their firm to develop.

The role of human, social and organizational capital in the interconnections between AEROS informants' perception of HR practices and, their organizational commitment and job satisfaction is presented according to main themes from the data. These themes are related to: the impact of perception of HR practices on human, social and organizational capital, and, the impact of human, social and organizational capital on organizational commitment and job satisfaction.

9.3.1. The impact of perception of HR practices on human, social and organizational capital: AEROS

The upcoming subsections present the results related to the impact of AEROS informants' perception of HR practices on this division's human, social and organizational capital.

9.3.1.1. The impact of perception of HR practices on human capital: AEROS

The next table presents a key code used in the analysis of the connections between perception of HR practices and human capital in AEROS.

Code	Definition
<i>Perception of career opportunities as facilitating movements between different positions persuades worker to change position</i>	Describes that perception of the career opportunities practice (in terms of facilitating movements between job positions) persuades worker to seek movements into new positions.

Table 9.15: Key code used in the analysis of the interconnections between perception of HR practices and human capital in AEROS.

The subsequent table provides the frequency of the key code used in the analysis of the linkages between perception of HR practices and human capital in AEROS.

Code	Frequency
<i>Perception of career opportunities as facilitating movements between different positions persuades worker to change position</i>	22/38

Table 9.16: Frequency of a key code used in the analysis of the interconnections between perception of HR practices and human capital in AEROS.

From the HR practices that are in existence within AEROS, the data indicates that this division's informants' perception of their career opportunities practice can influence AEROS's human capital (there was nearly no evidence in the data indicating the presence of linkages between perception of other HR practices and human capital in AEROS). The results on the connection between perception of career opportunities and human capital in AEROS are mostly based on table 9.16. Common themes from AEROS informants point that their perception of their career opportunities practice (in terms of realizing that their company is facilitating their movements between working positions) has helped persuading them to aspire for movements into new job positions. The subsequent quote is an example of a verbatim statement (from an AEROS informant) describing how perception of career opportunities can encourage the employee to seek movements into different job positions (this quote was allocated the code: 'Perception of career opportunities as facilitating movements between different positions persuades worker to change position'):

'Working in business development was a farfetched thought I used to see myself in more technical roles you know crunching numbers and stuff like that but when I understood that such an opportunity is at my fingertips I was little by little encouraged to go into BD and I'm happy I finally completed this move it's a very interesting role especially if you're coming from technical it really gives you this interesting combination you know like doing engineering and then going for an MBA' (Knowledge worker AEROS 12, age 40 to less than 50, MEng, 20 or more years of work experience).

As mentioned in chapter 8, AEROS informants' movements between working positions appear to have assisted them in developing their knowledge and skills. Accordingly, as AEROS informants' perception of their career opportunities practice can persuade them to move into new positions, this perception can help increasing their knowledge and abilities. Hence, it seems that this division's informants' perception of their career opportunities can enhance AEROS's human capital. Whereas there are not enough investigations of the impact of knowledge workers' perception of HR practices on human capital, researchers have claimed that the career opportunities practice might enhance employees' skills and knowledge (Horwitz, 2003; Koch and McGrath, 1996). It is worth indicating that while AEROS informants generally feel that their selection practice has influenced their division's human capital, it seems from the data that it is the actual practice of selection that is more likely to impact AEROS's human capital rather than informants' perception of this practice.

9.3.1.2. The impact of perception of HR practices on social capital: AEROS

The general trend in the data points that AEROS's informants' perceptions of job security and compensation can contribute to the development of aspects of social capital in their division (there was almost no evidence in the data indicating linkages between perception of other HR practices and social capital in AEROS). The next table presents key codes used in the analysis of the connections between perception of HR practices and social capital, in AEROS.

Code	Definition
<i>Perception of high levels of job security enhances willingness to share common goals with employees inside the team</i>	Describes that perception of high levels of job security enhances worker's willingness to share common goals with her/his co-workers in the team.
<i>Perception of high levels of job security can impact willingness to share non-eminant and/or long-term common goals, as this perception promotes feelings that worker will be employed in firm for long periods of time</i>	Describes that perception of high levels of job security can impact a worker's willingness to share non-eminant and/or long-term common goals, as this perception promotes feelings that worker will be employed in firm for long periods of time.

Code (continued)	Definition
<i>Perception of compensation practice, as linking employee remuneration with overall company profits, enhances cooperation and/or coordination with co-workers in the team.</i>	Describes that perception of compensation practice, as linking employee remuneration with overall company profits, can enhance worker's cooperation and/or collaboration with co-workers in the team.

Table 9.17: Key codes used in the analysis of the interconnections between perception of HR practices and social capital in AEROS.

The following table presents the frequency of the key codes used in the analysis of the linkages between AEROS informants' perception of HR practices and social capital in this division (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Perception of high levels of job security enhances willingness to share common goals with employees inside the team</i>	20/38(frequency from both rounds) 8/8(frequency from second round)
<i>Perception of high levels of job security can impact willingness to share non-eminant and/or long-term common goals, as this perception promotes feelings that worker will be employed in firm for long periods of time</i>	11/38(frequency from both rounds) 7/8(frequency from second round)
<i>Perception of compensation practice, as linking employee remuneration with overall company profits, enhances cooperation and/or coordination with co-workers in the team</i>	24/38(frequency from both rounds) 7/8(frequency from second round)

Table 9.18: Frequency of key codes used in the analysis of the interconnections between perception of HR practices and social capital in AEROS.

The findings presented in the following paragraphs are predominantly based on table 9.18. The data indicates that AEROS informants' perception of job security can help developing social capital in this division. Common themes indicate that this division's informants' perception of high levels of job security can increase their

willingness to share common goals with their teammates; these themes were present in the overwhelming majority of transcripts from the second round of interviews; where more direct and focused questions on the impact of perception of HR practices on social capital were asked. There were some indications, in the second round of interviews, which might perhaps explain this result. These themes point that perception of high levels of job security can encourage a worker to mainly share long-term goals with teammates, as job security can project that the employee can be working in the firm for a long period of time. The following quote is an example of a verbatim statement (from an informant in AEROS) illustrating a connection between perception of job security and social capital (this quote was allocated the code: 'Perception of high levels of job security can impact willingness to share non-eminant and/or long-term common goals, as this perception promotes feelings that worker will be employed in firm for long periods of time'):

'We're expecting to achieve our goals hopefully in like five years or so so I clearly need to feel secure or else I wouldn't be that interested in our end objective' (Knowledge worker AEROS 13, age more than 30 to less than 40, MSc, 15 to less than 20 years of work experience).

These results on job security resonate with earlier research on social capital, claiming that job security can assist in promoting long-term contracts between co-workers, which could help in building social capital (Dyer and Noboeka, 2000; Leana and Van Buren, 1999).

In addition to job security, the data points that AEROS informants' perception of their compensation practice can assist in the development social capital in this division. Common themes from informants in AEROS point that their perception of compensation practice, as connecting workers' remuneration with overall company profits, incentivizes them to cooperate and/or coordinate with their fellow teammates. The next quote is an example of a verbatim statement (from an informant in AEROS) describing a connection between perception of compensation and social capital (this quote was allocated the code: 'Perception of compensation practice, as linking employee remuneration with overall company profits, enhances cooperation and/or coordination with co-workers in the team'):

‘To be honest the long term plan affects my willingness to cooperate with colleagues... I can’t ignore that my earnings are largely based on our company’s performance so within my abilities I try to make sure that our numbers will increase and one way of doing that is through good cooperation with my teammates and mind you this is a high budget project and our success or failure will have its impact on [HITEC]’ (Knowledge worker AEROS 7, age more than 30 to less than 40, MSc, 10 to less than 15 years of work experience).

These findings on perception of compensation and social capital fall in line with previous studies, which have indicated that remuneration practices that reward workers’ performance with overall organizational profits can impact collaborative work within business entities (Ichniowski et al., 1997; Leana and Van Buren, 1999).

9.3.1.3. *The impact of perception of HR practices on organizational capital: AEROS*

The following table presents a key code used in the analysis of the connection between perception of HR practices and organizational capital, in AEROS.

Code	Definition
<i>Perception of compensation encourages worker to contribute to the procedures, databases and manuals in division, as worker feels that such contribution could affect the decisions pertinent to her/his participation in LTIP</i>	Describes that perception of compensation encourages worker to contribute to the procedures, databases and manuals in division, as worker feels that such contribution could affect the decisions pertinent to her/his participation in LTIP.

Table 9.19: Key code used in the analysis of the interconnections between perception of HR practices and organizational capital in AEROS.

The subsequent table provides the frequency of the key code used in the analysis of the connection between perception of HR practices and organizational capital in AEROS (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Perception of compensation encourages worker to contribute to the procedures, databases and manuals in division, as worker feels that such contribution could affect the decisions pertinent to her/his participation in LTIP</i>	17/38(frequency from both rounds) 8/8(frequency from second round)

Table 9.20: Frequency of a key code used in the analysis of the interconnection between perception of HR practices and organizational capital in AEROS.

The investigation of the connections between perception of HR practices and organizational capital in AEROS indicates that this division's informants' perception of their compensation practice can influence AEROS's organizational capital (there were nearly no evidence of linkages between perception of other HR practices and organizational capital in AEROS). The findings on the connection between perception of compensation and organizational capital in AEROS are mostly reliant on table 9.20. Whereas there are nearly half of all informants in AEROS who pointed towards an interconnection between perception of compensation and organizational capital in this division, an examination of the two rounds of interviews could lead to argue that perception of this practice can impact AEROS's organizational capital. When direct and focused questions on the influence of perception of HR practices on organizational capital were addressed in the second interview phase, a link between perception of compensation and organizational capital was present in all interview transcripts from this round. Particularly, it appears that this division's informants' perception of their long-term incentive plan element of their remuneration can encourage them to contribute towards AEROS's procedures, manuals and databases – as they perceive that such contributions could influence the decisions pertinent to their participation in the long-term incentive plan. These findings resonate with previous studies, which have stated that HR practices that persuade workers to contribute towards their firm's procedures, databases or manuals can have a role in the development of organizational capital (Hansen et al., 1999; Youndt and Snell, 2004; Youndt et al., 2004). The subsequent quote is an example of a verbatim statement (from an AEROS informant), illustrating the connection between perception of compensation and organizational capital (this quote was allocated the code: 'Perception of compensation encourages worker to contribute to the

procedures, databases and manuals in division, as worker feels that such contribution could affect the decisions pertinent to her/his participation in LTIP’):

‘I’m deeply involved in procedure design...no it’s not really in my job description but my involvement in this has a huge credence on my remuneration plan’ (Knowledge worker AEROS 14, age 40 to less than 50, MSc, more than 20 years of work experience).

9.3.2. The impact of human, social and organizational capital on organizational commitment and job satisfaction: AEROS

The following subsections present the results related to the influence of human, social and organizational capital on AEROS informants’ organizational commitment and job satisfaction.

9.3.2.1. The impact of organizational capital on organizational commitment: AEROS

The next table illustrates key codes used in the analysis of the link between organizational capital and organizational commitment, in AEROS.

Code	Definition
<i>Features of organizational capital in division enhance organizational commitment</i>	Describes that division’s features of organizational capital enhance worker’s organizational commitment.
<i>Features of organizational capital in division enhance organizational commitment as, they help enhancing knowledge</i>	Describes that features of organizational capital in division enhance organizational commitment, as they help enhancing worker’s knowledge.
<i>Mostly needs knowledge pertinent to solving mathematical and physics problems as well as, knowledge that is directly related to the aerospace products that worker is designing</i>	Describes that worker mostly needs knowledge pertinent to solving mathematical and physics problems as well as, knowledge that is directly related to the aerospace products that worker is designing (such as: knowledge of the specific regulations pertinent to the products, knowledge of the different tests that should be applied to the designs, knowledge of scientific proofs related to the designs and knowledge of quality control procedures).

Code (continued)	Definition
<i>Does not need to rely on firm to advance knowledge related to solving mathematical and physics problems, as worker has acquired this form of knowledge from her/his high end education</i>	Describes that worker does not need to depend on her/his firm to advance knowledge related to solving mathematical and physics problems, as worker has acquired this form of knowledge from his/her high end education.
<i>Needs to rely on firm to advance knowledge that is directly related to the aerospace products that worker is designing, as such knowledge is difficult to gather from outside of the organization</i>	Describes that worker needs to depend on her/his firm to advance knowledge that is directly related to the aerospace products that worker is designing (such as: knowledge of the specific regulations pertinent to the products, knowledge of the different tests that should be applied to the designs, knowledge of scientific proofs related to the designs and knowledge of quality control procedures); as such knowledge is difficult to gather from outside of the organization.
<i>Worker can best assimilate and trust gathering knowledge that is directly related to the aerospace products that worker is designing, by accessing pertinent information that is regulated, scripted in a clear and systematic manner within set design parameters</i>	Describes that worker can best assimilate and trust gathering knowledge that is directly related to the aerospace products that worker is designing, by accessing pertinent information that is regulated and scripted in a clear and systematic manner within set design parameters.

Table 9.21: Key codes used in the analysis of the interconnection between organizational capital and organizational commitment, in AEROS.

The following table provides the frequency of the key codes used in the analysis of the connection between organizational capital and organizational commitment in AEROS (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Features of organizational capital in division enhance organizational commitment</i>	33/38
<i>Features of organizational capital in division enhance organizational commitment as, they help enhancing knowledge</i>	31/38
<i>Mostly needs knowledge pertinent to solving mathematical and physics problems as well as, knowledge that is directly related to the aerospace products that worker is designing</i>	12/38(frequency from both rounds) 8/8(frequency from second round)
<i>Does not need to rely on firm to advance knowledge related to solving mathematical and physics problems, as worker has acquired this form of knowledge from her/his high end education</i>	10/38(frequency from both rounds) 8/8(frequency from second round)
<i>Needs to rely on firm to advance knowledge that is directly related to the aerospace products that worker is designing, as such knowledge is difficult to gather from outside of the organization</i>	13/38(frequency from both rounds) 8/8(frequency from second round)
<i>Worker can best assimilate and trust gathering knowledge that is directly related to the aerospace products that worker is designing, by accessing pertinent information that is regulated, scripted in a clear and systematic manner within set design parameters</i>	11/38 (frequency from both rounds) 7/8(frequency from second round)

Table 9.22: Frequency of key codes used in the analysis of the interconnection between organizational capital and organizational commitment, in AEROS.

The results on the influence of organizational capital on AEROS informants' organizational commitment are mostly based on table 9.22. The data points that AEROS's organizational capital can impact this division's informants' organizational commitment. The overwhelming majority of informants in AEROS have indicated that the features of the knowledge that is stored in procedures, databases and manuals that are present inside AEROS enhance their organizational commitment. The next quote is an example of a verbatim statement (from an

informant in AEROS), describing a link between organizational capital and organizational commitment (this quote was assigned the code: 'The procedures, databases and manuals in AEROS enhance organizational commitment'):

'My commitment is shaped by the work and our catalogues you know the tools we have are at the top edge of [this aerospace area]' (Knowledge worker AEROS 15, age 40 to less than 50, MBA, more than 20 years of work experience).

Common themes in the data indicate that the central reason behind the likely influence of organizational capital on AEROS informants' organizational commitment is connected to the knowledge development opportunities that the characteristics of this construct in AEROS seem to provide. Earlier studies have posited that the presence of extensive knowledge and information inside a firm's procedures, manuals and databases can help enhancing workers' knowledge and experience (Subramaniam and Youndt, 2005; Youndt et al., 2004). In connection with commitment, previous papers have indicated that when employees perceive that their organization is providing them with prospects for knowledge development and growth this could enhance their organizational commitment (Arthur, 1994; Chang 1999, 2005; Gould-Williams, 2004; Purcell et al., 2009). Such developmental opportunities could be of particular importance for knowledge workers, as this employee group can greatly aspire for knowledge development (Alvesson, 1993; Cappelli, 1999; May et al., 2002). The subsequent quote is an example of a verbatim statement (from an informant in AEROS), describing a link between AEROS's organizational capital and organizational commitment (this quote was assigned the code: 'Features of organizational capital in division enhance organizational commitment as, they help enhancing knowledge and skills'):

'[What keeps me here] it's the knowledge I am exposed to from our databases and processes, I can't think of many other places in Canada where I could advance my skills at such a level' (Knowledge worker AEROS 16, age 50 to less than 60, BSc, more than 20 years of work experience).

There are results (while limited) from the second round of interviews that seem to offer further insights on the impact of organizational capital on AEROS

informants' organizational commitment. These findings indicate that the influence of organizational capital on AEROS informants' organizational commitment might not be just reliant on the features of this construct in this division but as well, on the forms of knowledge that these employees need in their jobs, and which of these forms of knowledge these workers need to rely on their firm to develop. Particularly, all of the informants from the second round of interviews have mentioned that, in their nature of work, they normally need knowledge pertinent to solving mathematical and physics problems as well as, knowledge that is directly related to the aerospace products that these workers are designing (such as: knowledge of the specific regulations pertinent to their products, knowledge of the different tests that should be applied to their designs, knowledge of scientific proofs related to their designs and knowledge of quality control procedures). All of the informants from the second round of interviews have as well, stated that they do not need to rely on their organization to develop knowledge related to solving mathematical and physics problems, as they have acquired this form of knowledge from their high end education. However, all informants from the second interview round have stated that they usually need to depend on their organization in developing knowledge that is directly related to the aerospace products that they are designing, as this knowledge is not easily found outside AEROS (such as: knowledge of the specific regulations pertinent to their products, knowledge of the different tests that should be applied to their designs, knowledge of scientific proofs related to their designs and knowledge of quality control procedures). These informants have commonly explained that most often, they can only assimilate and trust gathering these forms of knowledge by accessing pertinent information that is regulated and scripted in a clear and systematic manner and, within set design parameters – in other words, by accessing codified knowledge (Boh, 2007; Hansen et al., 1999; Nonaka, 1994). Therefore, as AEROS's elements of organizational capital encompass somewhat rare and extensive codified knowledge directly related to the specific designs that this division's informants are working on, it appears that when advancing these forms of knowledge (knowledge of the different tests that should be applied to their designs, knowledge of scientific proofs related to their designs etc.) AEROS informants are likely to need to rely on their division's organizational capital. It is worth indicating that earlier research has emphasized that codified knowledge is best stored and exchanged within a firm's organizational capital (Hansen et al., 1999; Subramaniam

and Youndt, 2005; Youndt et al., 2004). In sum, it appears that the impact of organizational capital on AEROS informants' organizational commitment might not be just reliant on the characteristics of this construct inside this division but also, on the forms of knowledge that these workers need in their jobs, and which of these forms of knowledge AEROS informants need to rely on their organization to advance.

9.3.2.2. *The impact of organizational capital on job satisfaction: AEROS*

The subsequent table provides key codes used in the analysis of the connection between organizational capital and job satisfaction in AEROS.

Code	Definition
<i>Features of organizational capital in division enhance job satisfaction</i>	Describes that features of organizational capital in division enhance job satisfaction.
<i>Features of organizational capital in division enhance job satisfaction, as they help enhancing knowledge</i>	Describes that features of organizational capital in division enhance job satisfaction, as they help enhancing knowledge.
<i>Mostly needs knowledge pertinent to solving mathematical and physics problems as well as, knowledge that is directly related to the aerospace products that worker is designing</i>	Describes that worker mostly needs knowledge pertinent to solving mathematical and physics problems as well as, knowledge that is directly related to the aerospace products that worker is designing (such as: knowledge of the specific regulations pertinent to the products, knowledge of the different tests that should be applied to the designs, knowledge of scientific proofs related to the designs and knowledge of quality control procedures).
<i>Does not need to rely on firm to advance knowledge related to solving mathematical and physics problems, as worker has acquired this form of knowledge from her/his high end education</i>	Describes that worker does not need to depend on her/his firm to advance knowledge related to solving mathematical and physics problems, as worker has acquired this form of knowledge from his/her high end education.

Code (continued)	Definition
<i>Needs to rely on firm to advance knowledge that is directly related to the aerospace products that worker is designing, as such knowledge is difficult to gather from outside of the organization</i>	Describes that worker needs to depend on her/his firm to advance knowledge that is directly related to the aerospace products that worker is designing (such as: knowledge of the specific regulations pertinent to the products, knowledge of the different tests that should be applied to the designs, knowledge of scientific proofs related to the designs and knowledge of quality control procedures); as such knowledge is difficult to gather from outside of the organization.
<i>Worker can best assimilate and trust gathering knowledge that is directly related to the aerospace products that worker is designing, by accessing pertinent information that is regulated, scripted in a clear and systematic manner within set design parameters</i>	Describes that worker can best assimilate and trust gathering knowledge that is directly related to the aerospace products that worker is designing, by accessing pertinent information that is regulated and scripted in a clear and systematic manner within set design parameters.

Table 9.23: Key codes used in the analysis of the interconnection between organizational capital and job satisfaction, in AEROS.

The following table presents the frequency of the key codes used in the analysis of the connection between organizational capital and job satisfaction in AEROS (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Features of organizational capital in division enhance job satisfaction</i>	34/38
<i>Features of organizational capital in division enhance job satisfaction, as they help enhancing knowledge</i>	28/38
<i>Mostly needs knowledge pertinent to solving mathematical and physics problems as well as, knowledge that is directly related to the aerospace products that worker is designing</i>	12/38(frequency from both rounds) 8/8(frequency from second round)

Code (continued)	Frequency
<i>Does not need to rely on firm to advance knowledge related to solving mathematical and physics problems, as worker has acquired this form of knowledge from her/his high end education</i>	10/38(frequency from both rounds) 8/8(frequency from second round)
<i>Needs to rely on firm to advance knowledge that is directly related to the aerospace products that worker is designing, as such knowledge is difficult to gather from outside of the organization</i>	13/38(frequency from both rounds) 8/8(frequency from second round)
<i>Worker can best assimilate and trust gathering knowledge that is directly related to the aerospace products that worker is designing, by accessing pertinent information that is regulated, scripted in a clear and systematic manner within set design parameters</i>	11/38 (frequency from both rounds) 7/8(frequency from second round)

Table 9.24: Frequency of key codes used in the analysis of the interconnection between organizational capital and job satisfaction, in AEROS.

The results on the impact of organizational capital on AEROS informants' job satisfaction are mainly based on table 9.24. The data points that the features of organizational capital in AEROS can impact this division's informants' job satisfaction. The majority of AEROS informants have indicated that the characteristics of organizational capital in their division enhance their job satisfaction. The most common explanations provided for this connection, point that the features of organizational capital in AEROS can help informants in advancing their knowledge; which is a key job aspiration for knowledge workers (Alvesson, 1995; May et al., 2002). As indicated previously, earlier studies have posited that the existence of extensive knowledge and information inside a firm's procedures, manuals and databases can help increasing employees' knowledge and skills (Subramaniam and Youndt, 2005; Youndt et al., 2004). The following quote is a verbatim statement (from an AEROS informant) describing the link between organizational capital and job satisfaction (this quote was allocated the code: 'Features of organizational capital in division enhance job satisfaction, as they help enhancing knowledge and skills'):

'I learn from working on our designs, the means available to me, the tools are amazing, so I am satisfied because it's a great experience to learn, to advance, this is very rewarding' (Knowledge worker AEROS 7, age more than 30 to less than 40, MSc, 10 to less than 15 years of work experience).

Again, there is evidence (while limited), mainly from the second interview round, that appears to offer additional insights on the influence of organizational capital on AEROS informants' job satisfaction. As discussed in the earlier subsections, it seems that the influence of organizational capital on AEROS informants' job satisfaction might perhaps not just be reliant on the features of this construct in AEROS but also, on the forms of knowledge that these informants need in their work and which of these forms of knowledge they need to rely on their firm to develop.

9.3.2.3. The impact of social capital on organizational commitment and job satisfaction: AEROS

The next table presents key codes used in the analysis of the links between social capital and, AEROS informants' organizational commitment and job satisfaction.

Code	Definition
<i>Division's features of social capital enhance organizational commitment</i>	Describes that division's characteristics of social capital enhance organizational commitment.
<i>Division's features of social capital decrease organizational commitment</i>	Describes that division's features of social capital decrease organizational commitment.
<i>Division's features of social capital enhance job satisfaction</i>	Describes that division's features of social capital enhance job satisfaction.
<i>Division's features of social capital decrease job satisfaction</i>	Describes that division's features of social capital decrease job satisfaction.
<i>Does not need to rely on aspects of social capital to advance knowledge and skills</i>	Describe that worker does not need to rely on aspects of social capital to advance knowledge and skills.

Code (continued)	Definition
<i>Mostly needs knowledge pertinent to solving mathematical and physics problems as well as, knowledge that is directly related to the aerospace products that worker is designing</i>	Describes that worker mostly needs knowledge pertinent to solving mathematical and physics problems as well as, knowledge that is directly related to the aerospace products that worker is designing (such as: knowledge of the specific regulations pertinent to the products, knowledge of the different tests that should be applied to the designs, knowledge of scientific proofs related to the designs and knowledge of quality control procedures).
<i>Does not need to rely on firm to advance knowledge related to solving mathematical and physics problems, as worker has acquired this form of knowledge from her/his high end education</i>	Describes that worker does not need to depend on her/his firm to advance knowledge related to solving mathematical and physics problems, as worker has acquired this form of knowledge from his/her high end education.
<i>Needs to rely on firm to advance knowledge that is directly related to the aerospace products that worker is designing, as such knowledge is difficult to gather from outside of the organization</i>	Describes that worker needs to depend on her/his firm to advance knowledge that is directly related to the aerospace products that worker is designing (such as: knowledge of the specific regulations pertinent to the products, knowledge of the different tests that should be applied to the designs, knowledge of scientific proofs related to the designs and knowledge of quality control procedures); as such knowledge is difficult to gather from outside of the organization.
<i>Worker can best assimilate and trust gathering knowledge that is directly related to the aerospace products that worker is designing, by accessing pertinent information that is regulated, scripted in a clear and systematic manner within set design parameters</i>	Describes that worker can best assimilate and trust gathering knowledge that is directly related to the aerospace products that worker is designing, by accessing pertinent information that is regulated and scripted in a clear and systematic manner within set design parameters.

Table 9.25: Key codes used in the analysis of the interconnections between social capital and, organizational commitment and job satisfaction, in AEROS.

The following table presents the frequency of the key codes used in the analysis of the links between social capital and, AEROS informants' organizational commitment and job satisfaction (i.e. the number of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Division's features of social capital enhance organizational commitment</i>	1/38
<i>Division's features of social capital decrease organizational commitment</i>	2/38
<i>Division's features of social capital enhance job satisfaction</i>	1/38
<i>Division's features of social capital decrease job satisfaction</i>	1/38
<i>Does not need to rely on aspects of social capital to advance knowledge and skills</i>	24/38
<i>Mostly needs knowledge pertinent to solving mathematical and physics problems as well as, knowledge that is directly related to the aerospace products that worker is designing</i>	12/38(frequency from both rounds) 8/8(frequency from second round)
<i>Does not need to rely on firm to advance knowledge related to solving mathematical and physics problems, as worker has acquired this form of knowledge from her/his high end education</i>	10/38(frequency from both rounds) 8/8(frequency from second round)
<i>Needs to rely on firm to advance knowledge that is directly related to the aerospace products that worker is designing, as such knowledge is difficult to gather from outside of the organization</i>	13/38(frequency from both rounds) 8/8(frequency from second round)
<i>Worker can best assimilate and trust gathering knowledge that is directly related to the aerospace products that worker is designing, by accessing pertinent information that is regulated, scripted in a clear and systematic manner within set design parameters</i>	11/38 (frequency from both rounds) 7/8(frequency from second round)

Table 9.26: Frequency of key codes used in the analysis of the interconnections between social capital and, organizational commitment and job satisfaction, in AEROS.

The findings on the connection between social capital and, AEROS informants' organizational commitment and job satisfaction are mainly based on table 9.26. There was little evidence in that data pointing towards a link between AEROS's attributes of social capital and this division's informants' organizational commitment and job satisfaction. This perhaps could be explained by the themes found in the data, indicating that AEROS informants do not generally need to rely on aspects of social capital to advance their knowledge and skills (Arthur, 1994; Chang 1999, 2005; Gould-Williams, 2004; Locke, 1976; Purcell et al., 2009).

There was evidence (while limited), mostly from the second round of interviews, that appear to offer further insights on the apparent lack of connection between AEROS social capital and this division's informants' attitudes. This evidence indicates that the influence of social capital on AEROS informants' commitment and job satisfaction might be dependent on the forms of knowledge that these employees need in their jobs, and which of these forms of knowledge they need to rely on their firm to advance. As mentioned in the two earlier subsections, all informants from the second round of interviews have stated that, in their jobs, they often need knowledge pertinent to solving mathematical and physics problems as well as, knowledge that is directly related to the aerospace products that they are designing. As indicated earlier, these informants (from round two) have overwhelmingly pointed that they do not need to rely on their firm to advance knowledge related to solving mathematical and physics problems, as they have developed this form of knowledge from their education. Conversely, all informants from round two have mentioned that they normally need to depend on their company to advance knowledge that is directly related to the aerospace products that they are designing. Moreover, these informants have as well, explained that normally, they can only assimilate and trust gathering these forms of knowledge through access to pertinent knowledge that is regulated and scripted in a clear and systematic manner and, within set design parameters (i.e. through access to codified knowledge (Boh, 2007; Hansen et al., 1999; Nonaka, 1994)). Therefore, it seems that, as AEROS informants might need to rely on their firm to advance knowledge that can be best developed through access to codified information, social capital might not be the best learning medium for this division's informants. In fact, previous research, has

highlighted that codified knowledge is normally best shared and acquired through scripted knowledge that is stored in a firm's organizational capital, rather than discussions and exchanges amongst workers (Hansen et al., 1999; Subramaniam and Youndt, 2005; Youndt et al., 2004). Accordingly, it appears that the apparent lack of connection between social capital and attitudes in AEROS could perhaps be further explained by the forms of knowledge that this division's workers need in their work, and which of these forms of knowledge they need to rely on their firm to develop.

9.3.2.4. *The impact of human capital on organizational commitment and job satisfaction: AEROS*

There were little indications in the data pointing that AEROS's human capital can directly influence this division's informants' attitudes. AEROS informants have commonly indicated that it is the knowledge stored within their division's organizational capital and not in individuals within their group that can impact their job satisfaction and organizational commitment.

Nonetheless, a close examination of the data appears to indicate that AEROS human capital can indirectly impact this division's informants' attitudes, through its likely function in building this group's organizational capital. The next table presents a key code used in the analysis of the link between human capital and, organizational commitment and job satisfaction in AEROS.

Code	Definition
<i>Human capital contributes to organizational capital</i>	Describes that worker contributes with her/his own knowledge and/or experience towards AEROS's procedures, databases and manuals.

Table 9.27: Key code used in the analysis of the interconnections between human capital and, organizational commitment and job satisfaction, in AEROS.

The subsequent table provides the frequency of the key code used in the analysis of the link between human capital and attitudes in AEROS (i.e. the number

of informants who have this code present in their interview transcript against the overall number of informants).

Code	Frequency
<i>Human capital contributes to organizational capital</i>	25/38

Table 9.28: Frequency of key code used in the analysis of the interconnections between human capital and, organizational commitment and job satisfaction, in AEROS.

The findings on the link between human capital and organizational capital in AEROS are predominantly dependent on table 9.28. As mentioned, AEROS human capital appears to influence this division's organizational capital. Common themes from AEROS informants point that these employees often contribute with their knowledge and experience (from previously conducted designs, tests and aerodynamic applications) towards their division's databases, procedures and manuals. This falls in line with earlier studies' claims that the knowledge of individuals can help building a firm's organizational capital (Subramaniam and Youndt, 2005; Youndt et al., 2004). The following quote is an example of a verbatim statement (from an AEROS informant) describing the connection between human capital and organizational capital (this quote was assigned the code: 'Human capital contributes to organizational capital'):

'Before I get assigned into a new project I'm expected to take a small period to organize and write down my data, tests results...they are used in databases for upcoming assignments' (Knowledge worker AEROS 17, age 40 to less than 50, MEng, more than 20 years of work experience).

9.4. Conclusion

Chapter 8 has illustrated the within-case analysis of the interconnections between informants' perception of HR practices and, their organizational commitment and job satisfaction. Moreover, this chapter has presented the within-case analysis of the role of human, social and organizational capital in the interconnections between informants' perception of HR practices and, their organizational commitment and

job satisfaction. After presenting the analysis of the findings inside each of SAND and AEROS, the subsequent chapter will cross-examine the key themes from each case, in an attempt to reach a more thorough understanding of results.

CHAPTER 10

Cross-Case Examination

10.1. Introduction

The aim of this thesis is to attempt and understand how human, social and organizational capital can influence the interconnections between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction. In reaching its objective, this thesis has completed a within-case analysis of the data from SAND and AEROS. Chapter 8 has presented the within-case analysis pertinent to the connections between perception of HR practices and, organizational commitment and job satisfaction. Subsequently, chapter 9 has illustrated the within-case analysis for the role of human, social and organizational capital in the interconnections between perception of HR practices and, organizational commitment and job satisfaction. After presenting the within-case analysis for SAND and AEROS, this chapter cross-examines the key themes (from the two studied cases) provided in chapters 8 and 9. This can aid in reaching more comprehensive conclusions and could deepen the understandings and explanations offered during the within-case analysis (Miles and Huberman, 1994).

The analysis in this chapter uses summary tables that contrast frequency of codes between the two studied cases. Accordingly, tables comparing the frequency of key codes between SAND and AEROS are presented in different subsections of this chapter. The chapter firstly, starts by cross-examining themes related to the interconnections between perception of HR practices and, organizational commitment and job satisfaction. Following that, the chapter cross-analyzes the themes pertinent to the role of human, social and organizational capital in between perception of HR practices and, organizational commitment and job satisfaction.

10.2. The interconnections between informants' perception of HR practices and, their organizational commitment and job satisfaction: SAND and AEROS

The following subsections cross-examine themes (from SAND and AEROS) pertinent to the interconnections between informants' perception of HR practices and, their organizational commitment and job satisfaction. As mentioned in chapters 7 and 8 of this thesis, informants inside the two divisions were subject to the same HR practices (with the exception of a difference in the selection practice: where SAND emphasizes on candidates' personalities while AEROS does not seem to put that much weight on the latter factor). As it is described in the next subsections, the SAND and AEROS cases offer rather similar findings pertinent to the interconnection between informants' perception of HR practices and, their organizational commitment and job satisfaction. It seems that, in both cases, informants' perceptions of compensation, career opportunities, job autonomy and job security can impact their organizational commitment. Moreover, it appears that, within each of SAND and AEROS, informants' perceptions of career opportunities, communication and job autonomy can influence their job satisfaction. The within-case analysis and the cross-examination of the findings between the two cases have indicated that the characteristics of informants in both divisions (mainly their knowledge worker nature and, to a certain extent their presence in positions of key responsibility) seem to help shaping the interconnections between their perception of HR practices and, their organizational commitment and job satisfaction. This conclusion resonates with previous studies' claims that the features of worker groups can help explaining the linkages between their perception of HR practices and their work attitudes (Kinnie et al., 2005; Purcell et al., 2009). For each HR practice that exists inside SAND and AEROS, the following subsections present the cross-case examination of the interconnections between informants' perception of the HR practice and, their organizational commitment and job satisfaction.

10.2.1. Link between perception of compensation and, organizational commitment and job satisfaction

The subsequent table compares (between SAND and AEROS) the frequency of key codes used in the analysis of the link between perception of compensation and

organizational commitment. The definition of each of these codes was provided in chapter 8.

Code	Frequency (SAND)	Frequency (AEROS)
<i>Link between perception of compensation and organizational commitment</i>	65/68	35/38
<i>Perception of LTIP as making overall compensation comparable to industry standards helps in making worker wanting to remain in the organization</i>	58/68	32/38
<i>Perception of overall compensation as notably lower than industry standards could make worker think of leaving organization</i>	52/68	29/38
<i>Perception of compensation as being notably lower than market could make worker think of changing firms, as such perception could project that organization does not value the worker</i>	43/68	27/38
<i>Perception of compensation as being non-competitive in comparison with industry reduces organizational commitment</i>	4/68	1/38
<i>Not seeking for additional pay in comparison with the industry</i>	46/68	24/38
<i>Looking for aspects of the job in the firm more than competitive pay in comparison with industry</i>	37/68	22/38
<i>Looking for features of co-worker relations in firm more than competitive pay in comparison with industry</i>	42/68	2/38

Table 10.1: Comparing (between SAND and AEROS) the frequency of key codes used in the analysis of the connection between perception of compensation and organizational commitment.

The subsequent presentation of results is mainly based on table 10.1. The data indicates that, in SAND and AEROS, informants' perception of compensation can impact organizational commitment. It appears that perception of the long-term incentive plan, as allowing their overall compensation to be close to market remuneration standards, has made the majority of informants (inside each of SAND and AEROS) not think of changing employers. Furthermore, most informants in each of these two divisions have mentioned that if they perceive that their overall remuneration is becoming notably lower than industry pay benchmarks then this

could encourage them to change organizations. Common themes found in both SAND and AEROS seem to explain the link between informants' perception of compensation and their organizational commitment. These common themes indicate that if informants view that their overall compensation is markedly lower than industry standards, then this could make them think of shifting organizations, as this perception could make them feel that they are not valued by their organization.

The apparent connection between perception of compensation and organizational commitment in both SAND and AEROS, is in line with earlier studies on knowledge workers (Baron and Hannan, 2002; Horwitz et al., 2003). Moreover, the rather similar explanations found for this link in both divisions, resonate with scholars' claims that knowledge workers generally recognize the value of their knowledge and abilities and consequently, they are often keen on being adequately remunerated in comparison with the external job market (Barney, 1991; May et al., 2002; Reed, 1996).

Nonetheless, while perception of notably lower compensation between their organization and the industry can decrease the organizational commitment of these two divisions' informants, there were few indications in SAND and AEROS data, pointing that perception of compensation, as not being competitive (i.e. providing notably more pay than other companies in the same market), can reduce organizational commitment. This may be explained by the existence of common themes, in each of SAND and AEROS, indicating that informants do not necessarily seek additional compensation in comparison with other organizations. Many informants from SAND and AEROS have elaborated that they aspire for the attributes of the job inside a company, more than additional monetary rewards. Furthermore, the majority of informants in SAND have explained that they search more for the features of co-workers relations inside a firm than additional financial compensation. These results fall in line with previous studies on knowledge workers, which have pointed that additional remuneration is not what these employees necessarily seek – instead they are mostly interested in the characteristics of their job and their social relationships at work (Alvesson, 1993; Horwitz et al., 2003; May et al., 2002; Thomson and Heron, 2002).

In sum, there seems to be rather similar findings pertinent to the connection between perception of compensation and organizational commitment between SAND and AEROS. Moreover, these similar results between these two divisions are likely to be explained by the knowledge worker nature of informants inside SAND and AEROS.

After cross-examining the link between perception of compensation and organizational commitment, the next table compares (between SAND and AEROS) the key codes used in the analysis of the connection between perception of this practice and job satisfaction; these codes were defined in chapter 8.

Code	Frequency (SAND)	Frequency (AEROS)
<i>Perception of compensation does not impact job satisfaction</i>	63/68	36/38
<i>Monetary compensation key aspiration in job</i>	2/68	0/38

Table 10.2: Comparison (between SAND and AEROS) of key codes used in the analysis of the link between perception of compensation and job satisfaction.

The following findings are mostly reliant on table 10.2. There were little indications in the data supporting a connection between perception of compensation and job satisfaction, for informants in each of SAND and AEROS. The vast majority of interviewed employees in both divisions have mentioned that their views of their compensation practice do not influence their job satisfaction. The little evidence found in both divisions, pointing towards remuneration as being a key job aspiration for informants, could perhaps explain this apparent lack of connection (Clark, 1996; Locke, 1976). The result on perception of compensation and job satisfaction from SAND and AEROS falls in line with claims from some scholars researching knowledge workers. Previous studies seem to indicate that pay might not be a crucial factor in the jobs of knowledge workers. These employees appear to be mostly interested in the actual aspects of the work they are performing and their job design (Horwitz et al., 2003). Therefore, it also appears that the knowledge worker nature

of SAND and AEROS informants is likely to have affected the linkages between their perception of compensation and their job satisfaction.

10.2.2. Link between perception of performance appraisal and, organizational commitment and job satisfaction

The subsequent table compares (between SAND and AEROS) key codes used in the analysis of the interconnection between perception of performance appraisal and organizational commitment; these codes were defined in chapter 8.

Code	Frequency (SAND)	Frequency (AEROS)
<i>Link between perception of performance appraisal and organizational commitment</i>	7/68	3/38
<i>Acknowledging that, within division type of aerospace work, is it difficult to get objective and/or accurate assessment of performance through performance appraisal practice</i>	0/68	26/38
<i>Acknowledging that, within division team structure, it is difficult to get objective and/or accurate assessment of performance through performance appraisal practice</i>	54/68	0/38
<i>No reliance on performance appraisal outcomes to see how performance is being evaluated but depends on informal talks</i>	43/68	23/38

Table 10.3: Comparison (between SAND and AEROS) of the frequency of key codes used in the analysis of the link between perception of performance appraisal and organizational commitment.

The following results are mainly based on table 10.3. There was little evidence in the SAND and AEROS data supporting a link between informants' perception of their performance appraisal practice and their organizational commitment. Informants in both divisions have generally indicated that they acknowledge the difficulty of getting objective outcomes out of their formal yearly evaluation practice. Most of SAND's informants have explained that within their division's team structure (constant employee movements between project teams during the appraisal year) it is difficult to formally assess a workers' performance using formal preset performance criteria; which are evaluated at the end of the working year. Moreover, in AEROS, informants have commonly pointed that within their aerospace type of work (where concrete outcomes can be best assessed after

long periods of time, usually extending a working year) it is rather hard to assess an individual's performance through formal yearly appraisal practices. Such realizations in SAND and AEROS are perhaps the likely reason for which most informants in these two divisions have mentioned that they do not depend on their formal appraisal practice to perceive how their performance is being assessed; but rather on informal discussions with peers and supervisors. Accordingly, it might be that perception of the performance appraisal practice does not generally influence SAND and AEROS informants' organizational commitment, as most of these employees do acknowledge that it is difficult for this practice to project how their organization is evaluating their job performance (Chang, 2005; Hutchison and Garstka, 1996; Wayne et al., 1997).

After contrasting the link between perception of performance appraisal and organizational commitment in SAND and AEROS, the next table compares (between both divisions) the frequency of key codes used in the analysis of the connection between performance appraisal and job satisfaction; these codes were defined in chapter 8.

Code	Frequency (SAND)	Frequency (AEROS)
<i>Link between perception of performance appraisal and job satisfaction</i>	6/68	3/38
<i>Acknowledging that, within division type of aerospace work, is it difficult to get objective and/or accurate assessment of performance through performance appraisal practice</i>	0/68	26/38
<i>Acknowledging that, within division team structure, is it difficult to get objective and/or accurate assessment of performance through performance appraisal practice</i>	54/68	0/38
<i>No reliance on performance appraisal outcomes to see how performance is being evaluated but depends on informal talks</i>	43/68	23/38

Table 10.4: Comparison (between SAND and AEROS) of the frequency of key codes used in the analysis of the link between perception of performance appraisal and job satisfaction.

The next results are mainly based on table 10.4. There were few indications in the data (in both divisions) pointing towards a link between informants' perception of their performance appraisal practice and their job satisfaction. Once

more, it seems that the majority of informants in SAND and AEROS acknowledge that, within the features of their divisions (the team structure in SAND and type of aerospace work in AEROS), it is rather difficult to obtain objective outcomes out of formal evaluation practices. Accordingly, it seems that SAND and AEROS informants do recognize that it is difficult for the performance appraisal practice to project how their company is assessing their job contribution; which is a likely reason for why perception of this practice does not seem to influence the job satisfaction of most informants in these two cases (Chang, 2005; Hutchison and Garstka, 1996; Wayne et al., 1997).

10.2.3. Link between perception of career opportunities and, organizational commitment and job satisfaction

The next table compares (between SAND and AEROS) the frequency of key codes used in the analysis of the link between perception of career opportunities and organizational commitment; these codes were defined in chapter 8.

Code	Frequency (SAND)	Frequency (AEROS)
Link between perception of career opportunities and organizational commitment	63/68	37/38
<i>Perception of prospects for lateral movements enhances organizational commitment</i>	48/68 (all of the 48 informants were 40 years old or above) 7/68 (all of the 7 informants were below the age of 40)	26/38 (all of the 26 informants were 40 years old or above) 7/38 (all of the 7 informants were below the age of 40)
<i>Perception of prospects for lateral movements enhances organizational commitment as these prospects can help developing knowledge and skills while satisfying aspiration for not adding on current work responsibilities</i>	46/68 (all of the 46 informants were 40 years old or above)	25/38 (all of the 25 informants were 40 years old or above)
<i>Perception of prospects for lateral movements enhances organizational commitment as these prospects can help developing knowledge and skills</i>	5/68 (all of the 5 informants were below the age of 40)	7/38 (all of the 7 informants were below the age of 40)

Code (continued)	Frequency (SAND)	Frequency (AEROS)
<i>Perception of lack of opportunities for promotion decreases organizational commitment</i>	8/68 (all of the 8 informants were 40 years old or above)	4/38 (all of the 4 informants were 40 years old or above)
<i>Perception of promotional opportunities enhances organizational commitment</i>	6/68 (all of the 6 informants were below the age of 40)	6/38 (all of the 6 informants were below the age of 40)
<i>Perception of prospects for promotion can impact organizational commitment as these prospects can relate to aspirations for increased levels of work responsibility</i>	7/68 (all of the 7 informants were 40 years old or above) 6/68 (all of the 6 informants were below the age of 40)	3/38 (all of the 3 informants were 40 years old or above) 4/68 (all of the 4 informants were below the age of 40)

Table 10.5: Comparison (between SAND and AEROS) of the frequency of key codes used in the analysis of the link between perception of career opportunities and organizational commitment.

The following findings are mostly reliant on table 10.5. It seems that perception of career opportunities can impact the organizational commitment of informants in both SAND and AEROS. The majority of informants in both divisions have explained that this practice can increase their organizational commitment, as they feel that it provides them with opportunities for knowledge and skills development. Interestingly however, in both divisions, there were some different views given on career opportunities and commitment, by informants from different age brackets (between informants who were below 40 and ones who were 40 years old or above). While the overwhelming majority of informants (from SAND and AEROS) who were 40 years old or above did not generally perceive this practice as offering promotional prospects, most of these informants have stated that their perception of their career opportunities practice, as assisting in lateral movements between different job positions, increases their organizational commitment. Many of these informants (in SAND and AEROS) have explained that prospects for horizontal movements can enhance their commitment, as these movements can help them advance their knowledge and/or skills, while fulfilling their aspirations for not jumping into higher working positions (which can fairly add on their current job responsibilities and consequently, can influence their personal life). Conversely, it seems that perception of their career opportunities practices (as providing both

promotional prospects and facilitating lateral movements) seems to enhance the organizational commitment, of the majority of informants who were less than 40 years old (inside SAND and AEROS). Perception of horizontal prospects seems to increase the organizational commitment of these informants (in the two cases) as such opportunities can assist them in advancing their knowledge and abilities. As well, perception of promotional possibilities appears to enhance the organizational commitment of these informants (inside both SAND and AEROS) as such prospects can satisfy their aspirations for additional degrees of work responsibility.

The next table compares (between SAND and AEROS) the frequency of key codes used in the analysis of the link between perception of career opportunities and job satisfaction; these codes were defined in chapter 8.

Code	Frequency (SAND)	Frequency (AEROS)
<i>Link between perception of career opportunities and job satisfaction</i>	60/68	36/38
<i>Perception of prospects for lateral movements enhances job satisfaction</i>	44/68 (all of the 44 informants were 40 years old or above). 8/68 (all of the 8 informants were below the age of 40).	25/38 (all of the 25 informants were 40 years old or above). 6/38 (all of the 6 informants were below the age of 40).
<i>Perception of prospects for lateral movements enhances job satisfaction as these prospects can help developing knowledge and skills while satisfying aspiration for not adding on current work responsibilities</i>	37/68 (all of the 37 informants were 40 years old or above).	20/38 (all of the 20 informants were 40 years old or above).
<i>Perception of prospects for lateral movements enhances job satisfaction as these prospects can help developing knowledge and skills</i>	6/68 (all of the 6 informants were below the age of 40)	4/68 (all of the 4 informants were below the age of 40)
<i>Perception of lack of opportunities for promotion decreases job satisfaction</i>	8/68 (all of the 8 informants were 40 years old or above).	4/38 (all of the 4 informants were 40 years old or above).
<i>Perception of promotional opportunities enhances job satisfaction</i>	8/68 (all of the 8 informants were below the age of 40).	7/38 (all of the 7 informants were below the age of 40).

Code (continued)	Frequency (SAND)	Frequency (AEROS)
<i>Perception of prospects for promotion can impact job satisfaction as these prospects can relate to aspirations for increased levels of work responsibility</i>	5/68 (all of the 5 informants were 40 years old or above) 7/68 (all of the 7 informants were below the age of 40).	4/38 (all of the 4 informants were 40 years old or above) 6/38 (all of the 6 informants were below the age of 40).

Table 10.6: Comparison of the frequency of key codes (between SAND and AEROS) used in the analysis of the link between perception of career opportunities and job satisfaction.

The next results are mainly based on table 10.6. It appears that perception of the career opportunities practice can impact the job satisfaction of informants in both SAND and AEROS. Common themes from both divisions indicate that perception of career opportunities can enhance informants' organizational commitment, as they view this practice as one that is providing them with opportunities for knowledge and skills development. However, similarly to the findings on organizational commitment, there were some notably different views on career opportunities and job satisfaction, provided by informants from different age brackets in both divisions (between informants who were below 40 and the ones who were 40 years old or above). Perception of career opportunities, as facilitating horizontal movements between positions, seems to increase the job satisfaction of most informants who were 40 years old or above (in both cases). These informants, inside SAND and AEROS, have generally explained that opportunities for lateral movements can enhance their job satisfaction, as these prospects can help them advance their credentials while not notably adding on their current job responsibilities; which could affect their personal life. On the other hand, perception of career opportunities (as providing promotional prospects and facilitating lateral movements) appears to increase the job satisfaction of most informants within both SAND and AEROS (who were less than 40 years old). Common themes from these informants (in both cases) point that their perception of lateral movements enhances their job satisfaction as such opportunities can help them develop their knowledge and skills. As well, most of these informants inside SAND and AEROS have generally stated that career opportunities that offer them possibilities for promotion enhance their job

satisfaction as such possibilities can satisfy their aspirations for increased levels of work responsibility.

In sum, perception of career opportunities is likely to impact the organizational commitment and job satisfaction of informants in both SAND and AEROS. The likely explanation for these connections, inside SAND and AEROS, seem to relate to the knowledge and skills development prospects that this practice appears to offer. This falls in line with earlier studies on knowledge workers, which have emphasized that this employee group often seeks movements between job positions as this could help advancing its knowledge and capabilities (Cappelli, 1999). Therefore, the similar findings (between the two divisions) on the connection between perception of career opportunities and work attitudes are likely to be the result of the knowledge worker nature of informants inside SAND and AEROS. Interestingly however, while earlier research on knowledge workers has highlighted the importance of movements up the organizational ladder for these employees (Horwitz et al., 2003; May et al., 2002), aspirations for promotion were mostly found amongst relatively younger informants (less than 40 years old) inside both SAND and AEROS. Most informants who were 40 years old or above (inside the two cases) seem to search for knowledge development through changing positions, but appear to seek horizontal movements more than vertical advancements. This outcome from SAND and AEROS's data falls in line with scholars' claims on workers' career stages and adult phases (Newell and Dopson, 1996; Super, 1980).

10.2.4. Link between perception of job security and, organizational commitment and job satisfaction

The following table compares (between SAND and AEROS) key codes used in the analysis of the link between perception of job security and organizational commitment; these codes were defined in chapter 8.

Code	Frequency (SAND)	Frequency (AEROS)
<i>Link between perception of job security and organizational commitment</i>	56/68	30/38
<i>Own level of knowledge and expertise enables to rather easily find job in other companies</i>	61/68	34/38
<i>Perception of high levels job security enhances organizational commitment as it projects signs that firm values the presence of worker in position of key responsibility and/or values the input of worker in such position</i>	49/68	26/38

Table 10.7: Comparison (between SAND and AEROS) of the frequency of key codes used in the analysis of the link between perception of job security and organizational commitment.

The next findings are predominantly based on table 10.7. Previous studies on knowledge workers normally undermine the importance of job security for this employee group, as knowledge workers are generally perceived as being highly employable (Arthur and Rousseau, 1996; Reed, 1996). Interestingly, whereas the majority of informants in both SAND and AEROS view themselves as being highly employable, there is evidence in both divisions pointing that perception of high levels of job security enhances the organizational commitment of the majority of informants inside SAND and AEROS. Common themes from informants (in both divisions) indicate that perception of high job security can increase organizational commitment as such perception projects that the firm values the worker's presence in a position of key responsibility and/or values the employee input into such position. Therefore, the similar results (between SAND and AEROS) pertinent to the impact of perception of job security on organizational commitment might be explained by the positions that SAND and AEROS informants are occupying within their respective divisions.

The next table contrasts (between SAND and AEROS) the frequency of key codes that were used in the analysis of the link between perception of job security and job satisfaction; these codes were delineated in chapter 8.

Code	Frequency (SAND)	Frequency (AEROS)
<i>Link between perception of job security and job satisfaction</i>	3/68	3/38
<i>Job security key job aspiration</i>	2/68	3/38

Table 10.8: Comparison (between SAND and AEROS) of the frequency of key codes used in the analysis of the link between perception of job security and job satisfaction.

The next results are mainly based on table 10.8. The data in SAND and AEROS shows little signs pointing towards a connection between informants' perception of job security and their job satisfaction. This may be explained by the presence of few statements (in SAND and AEROS transcripts) indicating that job security is a key job aspiration (Clark, 1996; Locke, 1976). It is worth noting that, the three informants who had job security as a key job aspiration in AEROS have indicated that high levels of job security can increase their job satisfaction (as well, the 2 informants from SAND, who viewed job security as a key job aspiration have pointed that the high degrees of job security can increase their job satisfaction).

While job security was portrayed as being a central job aspiration for many employee groups, previous research did not generally point towards job security as being amongst knowledge workers' main job aspirations (May et al., 2002). Therefore, the apparent lack of connection between perception of job security and job satisfaction in both cases could be explained by the knowledge worker nature of informants in these two divisions.

10.2.5. Link between perception of job autonomy and, organizational commitment and job satisfaction

The next table compares (between SAND and AEROS) key codes used in the analysis of the link between perception of job autonomy and organizational commitment; these codes were defined in chapter 8.

Code	Frequency(SAND)	Frequency(AEROS)
<i>Perception of job autonomy enhances organizational commitment</i>	54/68	32/38
<i>Perception of high levels of job autonomy enhances organizational commitment as it projects that firm trusts the worker inputs or decisions, and/or is recognizing the value of her/his knowledge</i>	39/68	24/38

Table 10.9: Comparison (between SAND and AEROS) of the frequency of key codes used in the analysis of the link between perception of job autonomy and organizational commitment.

The subsequent results are mostly based on table 10.9. The data from SAND and AEROS points that perception of job autonomy can impact informants' organizational commitment. Perception of high levels of job autonomy appears to enhance the organizational commitment of the majority of informants inside each division. Common themes (from both cases) indicate that perception of high levels of job autonomy could enhance informants' organizational commitment, as such perception can project that the organization trusts the informant's inputs or decisions and/or, values the knowledge that she/he possesses. These findings resonate with previous studies on knowledge workers, which have explained that these employees need to feel that their firm is recognizing their work and knowledge by providing them with high degrees of freedom and autonomy (Horwitz et al., 2003; Kinnear and Sutherland, 2000; Thomson and Heron, 2002). Therefore, the similar findings (between SAND and AEROS) on perception of job autonomy and organizational commitment are likely to be caused by the knowledge worker nature of informants in both divisions.

The following table compares (between SAND and AEROS) the frequency of key codes used in the analysis of the connection between perception of job autonomy and job satisfaction; these codes were defined in chapter 8.

Code	Frequency (SAND)	Frequency(AEROS)
<i>Perception of high levels of job autonomy enhances job satisfaction</i>	57/68	33/38
<i>Job autonomy main job aspiration</i>	44/68	31/38

Table 10.10: Comparison (between SAND and AEROS) of the frequency of key codes used in the analysis of the link between perception of job autonomy and job satisfaction.

The next findings are mainly reliant on table 10.10. It seems that perception of job autonomy can impact SAND and AEROS informants' job satisfaction. Perception of high levels of job autonomy can increase the job satisfaction of the majority of informants inside both cases. Common themes from both divisions point that perception of job autonomy can enhance informants' job satisfaction as these employees greatly aspire for autonomy when completing their jobs. Previous studies on knowledge workers have emphasized that that these workers usually seek high degrees of autonomy when applying their knowledge and expertise (Baron and Hannan, 2002; Horwitz et al., 2003; Kinnear and Sutherland, 2000; May et al., 2002; Morris, 2000; Thompson and Heron, 2002). Therefore, the similar findings (between SAND and AEROS) on the link between perception of job autonomy and job satisfaction, might be explained by the knowledge worker nature of informants in both divisions.

10.2.6. Link between perception of communication and, organizational commitment and job satisfaction

The next table compares (between SAND and AEROS) the frequency of key codes used in the analysis of the link between perception of communication and organizational commitment; these codes were defined in chapter 8.

<i>Code</i>	Frequency (SAND)	Frequency (AEROS)
<i>Link between perception of communication and organizational commitment</i>	7/68	3/38
<i>In current job position gets most information on company performance, strategy and/or goals through informal communication channels</i>	45/68	27/38

Table 10.11: Comparison (between SAND and AEROS) of the frequency of key codes used in the analysis of the link between perception of communication and organizational commitment.

The following findings are mainly based on table 10.11. There were few signs in SAND and AEROS transcripts, pointing towards a connection between perception of communication and organizational commitment. Such findings might be explained by common themes (inside both SAND and AEROS) indicating that, in their organizational position, SAND and AEROS informants usually get most of the insights on their firm's performance, strategy and goals through informal communication channels. Accordingly, informants in both divisions do not seem to need to rely on this practice in order to get overall information on their organization.

The following table compares (between SAND and AEROS) the frequency of key codes used in the analysis of the link between perception of communication and job satisfaction; these codes were defined in chapter 8.

Code	Frequency (SAND)	Frequency(AEROS)
<i>Positive perceptions of communication practice enhances job satisfaction</i>	36/68	24/38
<i>Positive perception of communication practice enhances job satisfaction, as good top-down communication assists in the job by keeping peers and/or subordinates informed about company information</i>	32/68	21/38

Table 10.12: Comparison (between SAND and AEROS) of the frequency of key codes used in the analysis of the link between perception of communication and job satisfaction.

The next findings are mostly reliant on table 10.12. Whereas SAND and AEROS informants did not appear to greatly depend on their communication practice to collect information on their company's performance and objectives, common themes point that positive perceptions of the communication practice can help enhancing the job satisfaction of a large number of informants in AEROS and slightly more than half of informants inside SAND. Common themes from informants in SAND and AEROS seem to explain that perception of positive communication can impact job satisfaction, as informants feel that positive top-down communication can keep their peers and/or subordinates up-to-date on overall company goals and directions. This is maybe a rather important issue for informants inside SAND and AEROS, as these employees are occupying positions of key responsibility over a number of workers and central factors inside their division. Moreover, perhaps a somewhat higher ratio of informants whose perception of communication can enhance their job satisfaction was found in AEROS, since this division's employees seem to be more enclosed in their teams than SAND's workers; which might put a higher strain on top-down communication.

10.2.7. Link between perception of training and, organizational commitment and job satisfaction

The next table compares (between SAND and AEROS) the frequency of key codes used in the analysis of the link between perception of training and organizational commitment; these codes were defined in chapter 8.

Code	Frequency (SAND)	Frequency (AEROS)
<i>Link between perception of training and organizational commitment</i>	2/68	0/38
<i>Do not need training courses to enhance knowledge and skills</i>	65/68	36/38

Table 10.13: Comparison of the frequency of key codes (between SAND and AEROS) used in the analysis of the link between perception of training and organizational commitment.

The following results are mainly reliant on table 10.13. There was little evidence in SAND and AEROS data pointing towards a link between informants'

perception of training and organizational commitment. This could be explained by the general trend (in SAND and AEROS transcripts) indicating that informants do not normally need training courses in order to develop their skills and knowledge. Such findings resonate with earlier studies on knowledge workers, which have emphasized that these employees do not usually rely on training to advance their knowledge and experience (May et al., 2002; Purcell et al., 2009). Therefore, the similar results (between SAND and AEROS) on the connection between perception of training and organizational commitment appear to be related to the knowledge worker nature of informants inside these two divisions.

The subsequent table compares (between SAND and AEROS) the frequency of key codes (between SAND and AEROS) used on the analysis of the link between perception of training and job satisfaction; these codes were delineated in chapter 8.

Code	Frequency (SAND)	Frequency (AEROS)
<i>Link between perception of training and job satisfaction</i>	1/68	1/38
<i>Do not need to depend on training course to enhance knowledge and skills</i>	65/68	36/38

Table 10.14: Comparison (between SAND and AEROS) of the frequency of key codes used in the analysis of the link between perception of training and job satisfaction.

The next findings are mainly based on table 10.14. There were little signs in SAND and AEROS transcripts indicating that perception of training can impact informants' job satisfaction. These findings seem to be explained by the general trend (in both SAND and AEROS) pointing that informants do not normally need training to advance their knowledge and skills. As mentioned previously, this finding seems to fall in line with earlier scholarly work on knowledge workers (Horwitz et al., 2003; May et al., 2002). Therefore, it also seems that the similar results (between SAND and AEROS) on the link between perception of training and job satisfaction can be explained by the knowledge worker nature of informants in both divisions.

10.2.8. Link between perception of employee selection and, organizational commitment and job satisfaction

The next table contrasts (between SAND and AEROS) the frequency of a key code used in the analysis of the link between perception of selection and organizational commitment; this code was defined in chapter 8.

Code	Frequency (SAND)	Frequency (AEROS)
<i>Link between perception of selection and organizational commitment</i>	5/68	2/38

Table 10.15: Comparison (between SAND and AEROS) of the frequency of a key code used in the analysis of the link between perception of selection and organizational commitment.

The next findings are mainly based on table 10.15. There was little evidence in SAND and AEROS data pointing towards a direct connection between perception of selection and informants' organizational commitment. In both cases, there were no apparent explanations for this lack of connection. As for earlier studies, these do not seem to offer enough knowledge pertinent to the influence of selection practices on knowledge workers (Horwitz et al., 2003).

The subsequent table compares (between SAND and AEROS) the frequency of a key code used in the analysis of the connection between perception of selection and job satisfaction.

Code	Frequency (SAND)	Frequency(AEROS)
<i>Link between perception of selection and job satisfaction</i>	4/68	2/38

Table 10.16: Comparison (between SAND and AEROS) of the frequency of a key code used in the analysis of the link between perception of selection and job satisfaction.

The following results were mainly reliant on table 10.16. There were little signs in SAND and AEROS data supporting a connection between informants' perception of their selection practice and their job satisfaction. As well, there were no apparent explanations found in the data for this lack of connection.

10.3. The role of human, social, and organizational capital in the interconnections between informants' perception of HR practices and, their organizational commitment and job satisfaction: SAND and AEROS

The previous section has cross-examined the interconnections between SAND and AEROS informants' perception of HR practices and, their organizational commitment and job satisfaction. In an attempt to have a more comprehensive understanding of the role of human, social and organizational capital in the connections between informants' perception of HR practices and their work attitudes, this section cross-examines this function between the two cases. This analysis is presented according to themes related to the impact of perception of HR practices on human, social and organizational capital, and, the influence of these forms of capital on organizational commitment and job satisfaction.

The comparison of the data between SAND and AEROS points that SAND's informants' perceptions of selection, job security and compensation appear to impact aspects of social capital in SAND, and AEROS informants' perceptions of job security and compensation seem to influence elements of social capital in AEROS (it is worth recalling that the selection practice focused on personality factors in SAND, while there was a lack of emphasis on these factors within the AEROS selection practice). Interestingly, while SAND and AEROS were subject to the same compensation and job security practices and while perceptions of these practices seem to influence social capital in both divisions, SAND's informants' perceptions of these two practices appear to influence elements of social capital both in teams and across teams in their division. Conversely, AEROS informants' perceptions of compensation and job security seem to impact aspects of social capital mostly inside teams. The comparison of the data between SAND and AEROS indicates that these different findings could perhaps be explained by the dissimilar characters of social relationships that are in existence within these two groups. As mentioned in chapter 7, SAND is characterized by employee relationships inside and across teams while AEROS's worker relations were mostly centered inside teams. In addition to the impact of perception of certain HR practices on social capital, it also appears that informants' perception of compensation can affect organizational capital in both SAND and AEROS. However, while perception of the compensation practice (which

is the same in both divisions) seems to influence organizational capital in both cases, AEROS informants' perception of compensation was found to have a likely impact on the development of procedures, databases and manuals inside this division, while SAND's informants' perception of this practice appears to mostly influence the development of manuals inside this case. The cross-examination of the data between the two cases points that these different results may be explained by the dissimilar features of organizational capital that are present inside these two divisions. As described in chapter 7, AEROS was characterised by the existence of procedures, databases and manuals, while SAND encompassed manuals and generally lacked the presence of databases and procedures. In relation to human capital, informants' perception of career opportunities appears to impact human capital in both SAND and AEROS. Therefore, the cross-examination of findings from the two cases indicates that in both cases, each of the three forms of capital can be influenced by perceptions of rather different HR practices. Furthermore, the comparison between SAND and AEROS points that the characteristics of social capital inside each case might have a role in how informants' perception of compensation and job security can impact social capital inside each division. Similarly, by contrasting the two cases, it seems that the features of organizational capital within SAND and AEROS might have a function in how informants' perception of compensation can influence their division's organizational capital.

The cross-examination of the data from the two cases also indicates that the features of social capital in SAND seem to enhance this division's informants' attitudes, whereas the characteristics of social capital in AEROS did not appear to have an influence on informants' organizational commitment and job satisfaction in this division. Moreover, AEROS attributes of organizational capital seem to increase informants' organizational commitment and job satisfaction in this division, while there were no notable indications of a likely connection between the features of SAND's organizational capital and informants' attitudes in this division. As well, the human capital that is present in SAND seems to impact attitudes through its role in building social capital in this division. As for AEROS, the human capital in existence in this division appears to influence informants' attitudes through its likely effect on AEROS's organizational capital. The results show that both, the role of social capital in enhancing SAND's informants' attitudes and the function of

organizational capital in increasing AEROS informants' commitment and job satisfaction, are likely to be mainly explained by the knowledge developmental prospects that the features of these constructs (inside each respective case) appear to offer. Conversely, it seems from the findings that SAND's informants do not usually need to rely on elements of organizational capital to advance their knowledge and AEROS informants do not normally need to depend on aspects of social capital to enhance their knowledge; which is a likely reason for why organizational capital does not seem to influence attitudes in SAND and social capital does not appear to impact attitudes in AEROS. There were some findings in the data (while limited) that seem to further explain why organizational capital is not likely to have an impact on SAND's informants' attitudes and why social capital does not appear to have an effect on AEROS informants' attitudes. These limited results point that the impact of social and organizational capital on informants' attitudes within each case, might be reliant on the forms of knowledge that each of SAND and AEROS informants need in their jobs, and which of these forms of knowledge these divisions' informants usually depend on their organization to develop.

Therefore, it seems that perception of selection, compensation and job security could indirectly enhance SAND's informants' organizational commitment and job satisfaction, through social capital – as these perceptions could contribute to the development of social capital in SAND and social capital in SAND can increase this division's informants' attitudes. Moreover, it appears that perception of career opportunities can indirectly enhance organizational commitment and job satisfaction in SAND – as it could influence this division's human capital, which in turn could impact SAND's social capital. In parallel, it seems that perception of compensation can indirectly increase AEROS informants' organizational commitment and job satisfaction, through organizational capital – as this perception could contribute to the development of organizational capital in AEROS and organizational capital in this division can enhance its informants' attitudes. As well, it appears that perception of career opportunities can indirectly increase organizational commitment and job satisfaction in AEROS – as it can impact this division's human capital, which in turn, can influence AEROS's organizational capital.

In sum, the cross examination of the findings between the two cases indicates that SAND and AEROS informants' perception of certain HR practices can have an indirect impact on their organizational commitment and job satisfaction, through the influence of these perceptions on forms of capital in their divisions. It appears that the features of forms of capital that are present within these cases can help shaping these indirect linkages inside each division. The characteristics of social capital in SAND seem to have a likely role in how perception of certain HR practices can impact this form of capital inside this division. As well, the features of social capital in SAND appear to help shaping how this construct is impacting this division's informants' attitudes. Furthermore, the characteristics of organizational capital in AEROS seem to have a possible function in how perception of compensation can influence this form of capital inside this division. Also, the features of organizational capital in AEROS appear to help shaping how this contextual variable is impacting this division's informants' attitudes. Interestingly as well, the cross-examination of the data points that these indirect linkages between SAND and AEROS informants' perception of HR practices and their attitudes, might perhaps be also dependent on the forms of knowledge that these employees need in their jobs, and which of these forms of knowledge SAND and AEROS informants have to rely on their company to advance.

10.3.1. The impact of perception of HR practices on social, organizational and human capital

The following subsections present the cross-case examination of the influence of perception of HR practices on social, organizational and human capital.

10.3.1.1. Link between perception of HR practices and social capital

The next table compares (between SAND and AEROS) key codes used in the analysis of the link between perception of HR practices and social capital; these codes were defined in chapter 9.

Code	Frequency (SAND)	Frequency (AEROS)
<i>Perception of selection practice, as putting high emphasis on candidates' values, enhances feelings of resilient trust towards division's workforce</i>	38/68(frequency from both rounds) 10/12 (frequency from second round)	0/38(frequency from both rounds) 0/8(frequency from second round)
<i>Perception of high levels of job security enhances willingness to share common goals with employees inside and across teams</i>	36/68(frequency from both rounds) 11/12(frequency from second round)	1/38(frequency from both rounds) 0/8(frequency from second round)
<i>Perception of high levels of job security can impact willingness to share non-eminant and/or long-term common goals, as this perception promotes feelings that worker will be employed in firm for long periods of time</i>	12/68 (frequency from both rounds) 9/12(frequency from second round)	11/38(frequency from both rounds) 7/8(frequency from second round)
<i>Perception of compensation practice, as linking employee remuneration with overall company profits, enhances cooperation with co-workers inside and across teams</i>	45/68(frequency from both rounds) 12/12(frequency from second round)	1/38(frequency from both rounds) 0/8(frequency from second round)
<i>Perception of high levels of job security enhances willingness to share common goals with employees inside the team</i>	0/68(frequency from both rounds) 0/12(frequency from second round)	20/38(frequency from both rounds) 8/8(frequency from second round)
<i>Perception of compensation practice, as linking employee remuneration with overall company profits, enhances cooperation and/or coordination with co-workers in the team</i>	0/68(frequency from both rounds) 0/12(frequency from second round)	24/38(frequency from both rounds) 7/8(frequency from second round)

Table 10.17: Comparison (between SAND and AEROS) of the frequency of key codes used in the analysis of the link between perception of HR practices and social capital.

The following findings are mainly based on table 10.17. The data indicates that SAND's informants' perceptions of selection, job security and compensation are likely to contribute to the development of aspects of social capital inside teams and across teams within their division. As for AEROS, the data points that this division's informants' perceptions of compensation and job security are likely to help building

elements of social capital inside teams within AEROS. It is worth noting that there were nearly no indications in both cases, pointing towards linkages between perception of other HR practices and aspects of social capital.

As mentioned, SAND's informants' perception of their selection practice seems to assist in building social capital in this division. Slightly more than half of SAND's informants have indicated that their perception of high emphasis on candidates' values in the selection practice enhances their belief in their workforce's values and/or integrity; these themes were present in the overwhelming majority of transcripts from the second round of interviews, when more direct questions on the impact of perception of selection on social capital were asked. This result on the possible influence of the selection practice on social capital falls in line with scholarly claims that selection practices that focus on candidates' norms and values can promote features of social capital inside organizations (Bigley and Pearce, 1998; Leana and Van Buren, 1999; McKnight et al., 1998). On the other hand, there were no signs of a connection between perception of selection and social capital inside AEROS interview transcripts. As indicated in chapter 7, the selection practice inside AEROS normally undermines candidates' personality and values. Accordingly, these different findings between SAND and AEROS can perhaps be explained by the focus on candidates' personality and values in SAND's employee selection, and the lack of emphasis on this factor in the AEROS selection practice.

In addition, SAND and AEROS informants' perception of job security appears to help building social capital inside these two divisions. The general trend in the data points that SAND and AEROS informants' perception of high levels of job security enhances their willingness to share common goals with their co-workers. In slightly more than half of SAND's informants' transcripts, it was found that high levels of job security can enhance a worker's willingness to share common goals with co-workers inside and across teams – this theme was in existence in the overwhelming majority of transcripts from the second round of interviews, when more direct questions on the influence of perception of job security on social capital were asked. Moreover, in almost half of AEROS informants' transcripts, perception of high levels of job security seemed to have enhanced an employee's willingness to share common objectives with her/his teammates; this theme was found in the vast

majority of transcripts from the second interview phase, when more direct questions on the impact of perception of job security on social capital were addressed. There were some similar indications in SAND and AEROS data (mostly from the second interview round) that might perhaps offer some explanations for the impact of perception of job security on social capital. The majority of informants (in SAND and AEROS) from the second interview phase have mentioned that high degrees of job security can encourage them to mostly share non-eminant and/or fairly long-term goals with their co-workers, as such perception can make them feel that they can be employed in the firm for a long period of time. The findings on the link between perception of job security and social capital resonate with earlier studies, which have claimed that job security can promote long-term contracts amongst employees and hence, could help building social capital in organizations (Dyer and Noboeka, 2000; Leana and Van Buren, 1999). Interestingly however, while SAND and AEROS informants are subject to the same job security practice and appear to perceive this practice in a rather similar way, perception of job security seems to enhance informants' will to share common goals in teams and across teams in SAND but, mostly inside teams in AEROS. These different findings could perhaps be explained by the existence of dissimilar characteristics of employee interactions between SAND and AEROS. As indicated in chapter 7, SAND is characterized by working relationships inside teams and across teams, while AEROS relationships are mostly focused inside teams.

Moreover, SAND and AEROS informants' perception of their compensation practice seems to help promoting social capital in these two divisions. The data points that perception of the compensation practice, as connecting employee remuneration with overall company profits, seems to encourage the majority of SAND's informants to cooperate with employees inside and across teams – this theme was found in all transcripts from the second interview phase, when more direct questions on the impact of perception of HR practices on social capital were asked. Furthermore, perception of compensation, as linking workers' remuneration with overall company profits, seems to have incentivized the majority of AEROS informants to cooperate with their teammates – this theme was found in the overwhelming number of AEROS informants' transcripts in the second round of interviews, when more direct questions on the impact of perception of HR practices

on social capital were asked. These findings fall in line with previous studies, which have stated that compensation practices that reward workers' performance with overall firm profits can influence collaborative work inside business entities (Ichniowski et al., 1997; Leana and Van Buren, 1999). However, similarly to the influence of perception of job security on social capital, SAND and AEROS informants' perception of compensation seems to impact rather different features of collaborative work in each division. SAND's informants' perception of their compensation practice is likely to encourage them to collaborate with workers inside and across teams, whereas AEROS informants' perception of this practice (which is the same amid the two divisions) appears to incentivize them to collaborate with co-workers within their team (but not across teams in AEROS). Again, these dissimilar results could perhaps be explained by the presence of different characteristics of employee interactions between SAND and AEROS; where SAND is characterized by working relationships inside teams and across teams, whereas AEROS employee relations are mostly focused inside teams.

10.3.1.2. Link between perception of HR practices and organizational capital

The subsequent table compares the frequency of key codes (between SAND and AEROS) used in the analysis of the links between perception of HR practices and organizational capital.

Code	Frequency (SAND)	Frequency (AEROS)
<i>Perception of compensation encourages worker to contribute to the procedures, databases and manuals in division, as worker feels that such contribution could affect the decisions pertinent to her/his participation in LTIP</i>	0/68(frequency from both rounds) 0/12(frequency from second round)	17/38(frequency from both rounds) 8/8(frequency from second round)
<i>Perception of compensation encourages worker to contribute to the manuals in division, as worker feels that such contribution could affect the decisions pertinent to her/his participation in LTIP</i>	29/68(frequency from both rounds) 11/12(frequency from second round)	0/38(frequency from both rounds) 0/8(frequency from second round)

Table 10.18: Comparison of the frequency of key codes (between SAND and AEROS) used in the analysis of the link between perception of HR practices and organizational capital.

The next results are mainly based on table 10.18. From the HR practices that are present inside each division, it seems that SAND and AEROS informants' perception of compensation can impact their divisions' organizational capital; there were almost no indications in the data (within both cases) pointing towards a link between perception of other HR practices and organizational capital. SAND's informants' perception of their long-term incentive plan can encourage them to contribute towards their division's manuals – as they perceive that such contributions could influence the decisions related to their participation in the LTIP. Whereas there were slightly less than half of all informants in SAND who had this theme present in their interview transcripts, this theme was in existence in the vast majority of informants' records from the second interview phase (when more direct questions on the impact of perception of HR practices on organizational capital were asked). Moreover, AEROS informants' perception of their long-term incentive plan element of their remuneration can encourage them to contribute towards AEROS's procedures, manuals and databases – as they perceive that such contributions could influence the decisions pertinent to their participation in the long-term incentive plan. While there are nearly half of all informants in AEROS who pointed towards a link between perception of compensation and organizational capital in this division, an examination of the two rounds of interviews could lead to argue that perception of this practice can influence AEROS's organizational capital. When direct and focused questions on the impact of perception of HR practices on organizational capital were asked in the second interview round, a connection between perception of compensation and organizational capital was present in all interview transcripts from this phase. These findings on the impact of compensation on organizational capital resonate with previous studies, which have argued that HR practices that incentivise workers to contribute towards their company's processes, databases and manuals (and the like), can help developing a firm's organizational capital (Hansen et al., 1999; Youndt and Snell, 2004; Youndt et al., 2004). Nonetheless, whereas SAND and AEROS informants were subject to the same compensation practice and appear to have rather similar views of this practice, it seems that perception of compensation is likely to impact somewhat different elements of organizational capital in each division. SAND informants' perception of compensation can influence the development of manuals inside this division, while AEROS informants' perception of compensation seems to encourage them to contribute to manuals, procedures and

databases in AEROS. These different findings could perhaps be explained by the dissimilar features of organizational capital that SAND and AEROS have. As mentioned in chapter 7, these two divisions have different characteristics of organizational capital: SAND is characterized by the existence of knowledge stored in manuals and a lack of databases and procedures, whereas AEROS encompasses knowledge stored in manuals, databases and procedures.

10.3.1.3. Link between perception of HR practices and human capital

The following table compares (between SAND and AEROS) the frequency of a key code used in the analysis of the connection between perception of HR practices and human capital; this code was defined in chapter 9.

Code	Frequency(SAND)	Frequency (AEROS)
<i>Perception of career opportunities as facilitating movements between different positions persuades worker to change position</i>	37/68	22/38

Table 10.19: Comparison (between SAND and AEROS) of the frequency of key codes used in the analysis of the link between perception of HR practices and human capital.

From the HR practices that are in existence inside the two cases, it seems that SAND and AEROS informants' perception of career opportunities can influence their division's human capital; there were almost no signs in the data indicating a connection between perception of other HR practices and human capital (inside the two cases). Common themes from informants (from both divisions) point that perception of career opportunities (in terms of realizing that the organization is facilitating movements between different job positions) can encourage the worker to seek movements into new positions. As mentioned in chapter 8, such movements appear to assist SAND and AEROS informants in developing their skills and knowledge. Accordingly, it seems that informants' (from both cases) perception of their career opportunities can help advancing their knowledge and skills and consequently, can influence these divisions' human capital. While there is a need for

more investigations of the influence of knowledge workers' perception of HR practices on human capital, scholars have posited that this practice might assist in developing and enhancing employees' knowledge and capabilities (Horwitz, 2003; Koch and McGrath, 1996).

10.3.2. The interconnections between forms of capital and, organizational commitment and job satisfaction

The following subsections present the cross-case examination of the impact of social, organizational and human capital on, organizational commitment and job satisfaction.

10.3.2.1. Link between social capital and, organizational commitment and job satisfaction

The subsequent table compares the frequency of key codes (between SAND and AEROS) used in the analysis of the links between social capital and, organizational commitment and job satisfaction; these codes were defined in chapter 9.

Code	Frequency (SAND)	Frequency (AEROS)
<i>Division's features of social capital enhance organizational commitment</i>	56/68	1/38
<i>Division's features of social capital decrease organizational commitment</i>	1/68	2/38
<i>Division's features of social capital enhance organizational commitment, as they help enhancing knowledge and skills</i>	52/68	0/38
<i>Division's features of social capital enhance job satisfaction</i>	51/68	1/38
<i>Division's features of social capital decrease job satisfaction</i>	1/68	1/38
<i>Division's features of social capital enhance job satisfaction, as they help enhancing knowledge and skills</i>	43/68	0/38
<i>Does not need to rely on aspects of social capital to advance knowledge and skills</i>	0/68	24/38
<i>Mostly needs knowledge of software codes and, know-how in understanding the customer context, know-how in dealing with innovative complex solutions and/or ability to have strong critical judgments</i>	17/68(frequency from both rounds) 12/12(frequency from second round)	0/38(frequency from both rounds) 0/8(frequency from second round)

Code (continued)	Frequency (SAND)	Frequency (AEROS)
<i>Does not need to rely on firm to advance knowledge of software codes, as can be acquired by reading books easily found outside the organization</i>	14/68(frequency from both rounds) 12/12(frequency from second round)	0/38(frequency from both rounds) 0/8(frequency from second round)
<i>Needs to rely on firm to advance know-how in understanding the customer context, know-how in dealing with innovative complex solutions and/or ability to have strong critical judgments, as these are best developed through exchanges with co-workers</i>	16/68(frequency from both rounds) 11/12(frequency from second round)	0/38(frequency from both rounds) 0/8(frequency from second round)
<i>Mostly needs knowledge pertinent to solving mathematical and physics problems as well as, knowledge that is directly related to the aerospace products that worker is designing</i>	0/68(frequency from both rounds) 0/12(frequency from second round)	12/38(frequency from both rounds) 8/8(frequency from second round)
<i>Does not need to rely on firm to advance knowledge related to solving mathematical and physics problems, as worker has acquired this form of knowledge from her/his high end education</i>	0/68(frequency from both rounds) 0/12(frequency from second round)	10/38(frequency from both rounds) 8/8(frequency from second round)
<i>Needs to rely on firm to advance knowledge that is directly related to the aerospace products that worker is designing, as such knowledge is difficult to gather from outside of the organization</i>	0/68(frequency from both rounds) 0/12(frequency from second round)	13/38(frequency from both rounds) 8/8(frequency from second round)
<i>Worker can best assimilate and trust gathering knowledge that is directly related to the aerospace products that worker is designing, by accessing pertinent information that is regulated, scripted in a clear and systematic manner within set design parameters</i>	0/68(frequency from both rounds) 0/12(frequency from second round)	11/38 (frequency from both rounds) 7/8(frequency from second round)

Table 10.20: Comparison (between SAND and AEROS) of the frequency of key codes used in the analysis of the links between social capital and, organizational commitment and job satisfaction.

The subsequent results are mainly based on table 10.20. The data points that social capital can impact SAND's informants' organizational commitment and job satisfaction. The features of social capital in SAND appear to enhance the organizational commitment and job satisfaction of the majority of informants in this division. Common themes from SAND's informants explain that the characteristics of social capital in their division increase their organizational commitment and job satisfaction, as these aspects can help them advance their skills and knowledge. Earlier research has highlighted that the existence of collective work and strong collaboration between employees as well as, the presence of trust in workers' relationships can assist in the development of employees' knowledge and capabilities (Dyer and Nobeoka, 2000; Kang et al., 2007; Leana and Van Buren, 1999; Purcell et al., 2009). Furthermore, previous studies have posited that when employees perceive that their firm is providing them with prospects for knowledge growth this could lead to workers reciprocating in enhanced levels of work attitudes (Arthur, 1994; Chang 1999, 2005; Gould-Williams, 2004; Purcell et al., 2009). Such prospects could be of particular importance for knowledge workers, as scholars have often emphasized the significance of knowledge developmental opportunities for this employee group (Alvesson, 1993; Cappelli, 1999; May et al., 2002). Conversely, while aspects of social capital seem to enhance attitudes in SAND, there were little signs indicating that the characteristics of social capital in AEROS can influence this division's informants' organizational commitment and job satisfaction. This perhaps could be explained by the general trend in the data pointing that AEROS informants do not usually need to rely on elements of social capital to develop their knowledge and skills (Arthur, 1994; Chang 1999, 2005; Gould-Williams, 2004; Purcell et al., 2009).

There was some evidence (even though limited), mainly from the second round of interviews (from SAND and AEROS), that appears to help further comparing the connection between social capital and attitudes, between the two divisions. These results indicate that the different influence of social capital on AEROS and SAND's informants' attitudes might be further explained by the forms of knowledge and/or abilities that these informants need in their work, and which of these forms of knowledge they need to depend on their company to develop. Particularly, all of SAND's informants (from the second round of interviews) have mentioned that, in their jobs, they usually need knowledge of certain software codes

and programming languages as well as, know-how in understanding the customer context, know-how in dealing with innovative complex solutions and/or ability to have strong critical judgements. The vast majority of these informants (from round two) have stated that they do not need to rely on their firm to advance their knowledge of software codes and programming languages, as these can be learned by reading books that are rather easily found outside of the company. Nonetheless, the majority of SAND's informants (from round two) have indicated that they normally need to depend on their organization in advancing their know-how in understanding the customer context, their know-how in dealing with innovative complex solutions and/or their ability to have strong critical judgements. These informants have commonly explained that they need to rely on their company to develop these types of knowledge and abilities (i.e. know-how in understanding the customer context, ability to have strong critical thinking etc.), as they feel that these forms can be best developed through the transfer of viewpoints, perceptions and/or judgements with colleagues. Scholars have described these sorts of exchanges as often encompassing the transfer of tacit knowledge (Boh, 2007; Hansen et al., 1999; Johnson-Laird, 1983; Nonaka, 1994). Furthermore, previous studies have mentioned that social capital is usually the best medium through which tacit knowledge can be developed and transmitted (Boh, 2007; Gertler, 2003; Hansen et al., 1999; Laursen and Mahnke, 2001; Nonaka, 1994; Preece, 2003; Scheepers et al., 2004). Therefore, SAND's social capital might be helping this division's informants in developing their knowledge, because some of the forms of knowledge that these workers need to enhance, seem to be best advanced through the transfer of tacit knowledge between employees. Hence, the influence of social capital on the attitudes of SAND's informants might be affected by the forms of knowledge that employees need and, which of these forms of knowledge they need to depend on their organization to advance.

On the other hand, all of AEROS informants (from the second round of interviews) have indicated that, in their work, they normally need knowledge related to solving mathematical and physics problems as well as, knowledge that is directly related to their aerospace products. These informants (from round two) have overwhelmingly mentioned that they do not need to depend on their organization to develop knowledge pertinent to solving mathematical and physics problems, since

they have acquired this form of knowledge from their education. However, all of AEROS informants (from round two) have stated that they generally need to rely on their firm to advance knowledge that is directly related to their aerospace products, as such knowledge is not easily acquired from outside of the organization. Moreover, AEROS informants (from round two) have commonly explained that they can only assimilate and trust acquiring these forms of knowledge (pertinent to their designs) through access to relevant information that is regulated and scripted in a clear and systematic manner and within set design parameters (i.e. through access to codified knowledge (Boh, 2007; Hansen et al., 1999; Nonaka, 1994)). Earlier studies have posited that codified knowledge is usually best shared and acquired through a firm's organizational capital rather than social relationships between employees (Hansen et al., 1999; Subramaniam and Youndt, 2005; Youndt et al., 2004). Accordingly, as AEROS informants seem to rely on their company to advance knowledge that is best developed through access to codified information, organizational capital might be more important for these informants than social capital. This perhaps could further explain why social capital does not seem to influence attitudes in AEROS.

10.3.2.2. Link between organizational capital and, organizational commitment and job satisfaction

The next table compares (between SAND and AEROS) the frequency of key codes used in the analysis of the connections between organizational capital and, organizational commitment and job satisfaction; these codes were defined in chapter 9.

Code	Frequency (SAND)	Frequency (AEROS)
<i>Features of organizational capital in division enhance organizational commitment</i>	0/68	33/38
<i>Features of organizational capital in division decrease organizational commitment</i>	2/68	0/38
<i>Features of organizational capital in division enhance organizational commitment as, they help enhancing knowledge</i>	0/68	31/38
<i>Features of organizational capital in division enhance job satisfaction</i>	0/68	34/38
<i>Features of organizational capital in division decrease job satisfaction</i>	2/68	0/38
<i>Features of organizational capital in division enhance job satisfaction, as they help enhancing knowledge</i>	0/68	28/38
<i>Does not need to rely on elements of organizational capital to advance knowledge and skills</i>	43/68	0/38
<i>Mostly needs knowledge pertinent to solving mathematical and physics problems as well as, knowledge that is directly related to the aerospace products that worker is designing</i>	0/68(frequency from both rounds) 0/12(frequency from second round)	12/38(frequency from both rounds) 8/8(frequency from second round)
<i>Does not need to rely on firm to advance knowledge related to solving mathematical and physics problems, as worker has acquired this form of knowledge from her/his high end education</i>	0/68(frequency from both rounds) 0/12(frequency from second round)	10/38(frequency from both rounds) 8/8(frequency from second round)
<i>Needs to rely on firm to advance knowledge that is directly related to the aerospace products that worker is designing, , as such knowledge is difficult to gather from outside of the organization</i>	0/68(frequency from both rounds) 0/12(frequency from second round)	13/38(frequency from both rounds) 8/8(frequency from second round)
<i>Worker can best assimilate and trust gathering knowledge that is directly related to the aerospace products that worker is designing, by accessing pertinent information that is regulated, scripted in a clear and systematic manner within set design parameters</i>	0/68(frequency from both rounds) 0/12(frequency from second round)	11/38 (frequency from both rounds) 7/8(frequency from second round)

Code (continued)	Frequency (SAND)	Frequency (AEROS)
<i>Mostly needs knowledge of software codes and, know-how in understanding the customer context, know-how in dealing with innovative complex solutions and/or ability to have strong critical judgments</i>	17/68(frequency from both rounds) 12/12(frequency from second round)	0/38(frequency from both rounds) 0/8(frequency from second round)
<i>Does not need to rely on firm to advance knowledge of software codes, as can be e acquired by reading books easily found outside the organization</i>	14/68(frequency from both rounds) 12/12(frequency from second round)	0/38(frequency from both rounds) 0/8(frequency from second round)
<i>Needs to rely on firm to advance their know-how in understanding the customer context, know-how in dealing with innovative complex solutions and/or ability to have strong critical judgments, as these are best developed through exchanges with co-workers</i>	16/68(frequency from both rounds) 11/12(frequency from second round)	0/38(frequency from both rounds) 0/8(frequency from second round)

Table 10.21: Comparison (between SAND and AEROS) of the frequency of key codes used in the analysis of the link between organizational capital and, organizational commitment and job satisfaction.

The following results are predominantly reliant on table 10.21. It seems that the features of organizational capital in AEROS can impact the organizational commitment and job satisfaction of informants in this division. The overwhelming majority of informants in AEROS have mentioned that the characteristics of organizational capital in their division can enhance their organizational commitment and job satisfaction. Common themes from AEROS, explain that the influence of organizational capital on this division's informants' attitudes can be related to the knowledge developmental prospects that the characteristics of this construct in AEROS seem to offer. Previous studies have claimed that the presence of extensive knowledge and information inside a company's procedures, manuals and databases can help developing employees' knowledge and experience (Subramaniam and Youndt, 2005; Youndt et al., 2004). Moreover, scholars have indicated that when workers perceive that their organization is providing them with prospects for knowledge development and growth this could enhance their work attitudes (Arthur, 1994; Chang 1999, 2005; Gould-Williams, 2004; Purcell et al., 2009). Such developmental prospects could be of particular significance for knowledge workers,

as this employee group can greatly aspire for knowledge growth and development (Alvesson, 1993; Cappelli, 1999; May et al., 2002). On the other hand, there were little signs in the data pointing towards a link between the characteristics of organizational capital in SAND and, this division's informants' organizational commitment and job satisfaction. Common themes from SAND's informants point that these employees do not usually need to depend on elements of organizational capital (manuals, procedures and databases in the firm) to acquire and develop their knowledge and/or abilities. This is perhaps why organizational capital does not seem to influence attitudes in SAND (Arthur, 1994; Chang 1999, 2005; Gould-Williams, 2004).

There was some evidence in the data (while limited), mostly from the second interview round, that seems to assist in further comparing the link between organizational capital and attitudes, between SAND and AEROS. The findings point that the different impact of organizational capital on AEROS and SAND's informants' attitudes might be further explained by the forms of knowledge and/or abilities that these informants need in their job, and which of these forms of knowledge they need to rely on their firm to develop. In particular, all of AEROS informants (from the second interview round) have mentioned that, in their job, they usually need knowledge pertinent to solving mathematical and physics problems along with, knowledge that is directly related to their aerospace products. As indicated earlier, these informants (from the second round) have overwhelmingly stated that they do not need to rely on their firm to enhance knowledge related to solving mathematical and physics problems, since they have gathered this form of knowledge from their previous education. Nonetheless, all of AEROS informants (from round two) have indicated that they normally need to depend on their organization to enhance knowledge that is directly related to their aerospace products, as this knowledge is not easily acquired from outside of their firm. Furthermore, AEROS informants (from round two) have generally explained that they can only assimilate and trust gathering these forms of knowledge (related to their aerospace designs) through access to relevant information that is regulated and scripted in a clear and systematic manner and within set design parameters (in other words, through access to codified knowledge (Boh, 2007; Hansen et al., 1999; Nonaka, 1994)). Earlier studies have posited that codified knowledge is usually best

shared and acquired through a firm's organizational capital (Hansen et al., 1999; Subramaniam and Youndt, 2005; Youndt et al., 2004). Therefore, AEROS's organizational capital might be assisting this division's informants in advancing their knowledge, as some of the forms of knowledge that these employees need to develop, appear to be best advanced through access to codified information (that is stored in AEROS's manuals, procedures and databases and that is not easily found outside of the firm). Accordingly, it may be that organizational capital can influence the attitudes of AEROS informants, as they need to enhance forms of knowledge that are best developed through access to codified information, that is not easily found outside of AEROS.

Conversely, all of SAND's informants (from the second interview round) have mentioned that, in their work, they normally need knowledge of certain software codes and programming languages as well as, know-how in understanding the customer context, know-how in dealing with innovative complex solutions and/or ability to have strong critical judgements. The overwhelming majority of these informants (from round two) have indicated that they often do not need to depend on their company to enhance their knowledge of software codes and programming languages, as these can be acquired by reading books that are fairly easily found outside of the firm. Nevertheless, the majority of SAND's informants (from round two), have stated that they usually need to rely on their company to enhance their know-how in understanding the customer context, their know-how in dealing with innovative complex solutions and/or their ability to have strong critical judgements. These informants have generally explained that they need to depend on their organization to develop these forms of knowledge and abilities (i.e. know-how in understanding the customer context, ability to have strong critical thinking etc.), as they feel that these forms can be best enhanced through the transfer of viewpoints, perceptions and/or judgements with colleagues. Scholars have argued that these types of exchanges normally encompass the transfer of tacit knowledge (Boh, 2007; Hansen et al., 1999; Johnson-Laird, 1983; Nonaka, 1994). As well, earlier research has posited that tacit knowledge is usually best exchanged through social capital rather than codified documentation (Boh, 2007; Gertler, 2003; Hansen et al., 1999; Laursen and Mahnke, 2001; Nonaka, 1994; Preece, 2003; Scheepers et al., 2004). Hence, as SAND's informants appear to depend on their organization to enhance

forms of knowledge that seem to be best developed through the transfer of tacit knowledge, social capital might be more important for these informants than organizational capital. This perhaps could further explain why organizational capital does not appear to impact their work attitudes.

10.3.2.3. Link between human capital and, organizational commitment and job satisfaction

There were no notable indications in both SAND and AEROS of a direct connection between these divisions' human capital and their informants' work attitudes. Nonetheless, a close examination of the data in both cases, points that human capital can have an indirect impact on informants' organizational commitment and job satisfaction.

The data indicates that human capital can have an indirect effect on informants' attitudes in SAND, through the likely influence of human capital on SAND's social capital (which in turn, is linked to organizational commitment and job satisfaction). Slightly more than half of SAND's informants have pointed that the firm-specific knowledge and experience that many workers have in this division, has assisted in the development of collaborative work in SAND – this theme was present in the majority of transcripts from the second interview phase, where direct and focused questions on the influence of human capital on social capital were asked. Furthermore, around 26 informants in SAND have indicated that the firm-specific knowledge and experience that many employees in SAND possess, has facilitated the understanding of common goals in this division – this theme was found in the majority of transcripts from the second phase of interviews, when direct and focused questions on the impact of human capital on social capital were asked. Such findings resonate with earlier studies, which have posited that firm-specific human capital can have a likely function in building social relationships and a common understanding within business entities (Brown and Duguid, 2001; Cicourel, 1973; Kang et al., 2007).

In parallel, the general data trend in AEROS also indicates that human capital can have an indirect impact on informants' attitudes in this division – as it could influence AEROS's organizational capital (which in turn, can impact organizational

commitment and job satisfaction). The majority of AEROS informants have pointed that they often contribute with their knowledge and experience (from previously conducted designs, tests and aerodynamic applications) towards their division's databases, procedures and manuals. This falls in line with earlier studies' claims that the knowledge of individuals can help building a firm's organizational capital (Subramaniam and Youndt, 2005; Youndt et al., 2004).

10.4. Conclusion

This chapter has cross-examined the collected data from SAND and AEROS. The subsequent chapter will offer a comprehensive representation of the main findings presented in chapter 10 and the previous analytical chapters. Chapter 11 will also compare these key outcomes with the earlier research and expected connections that were discussed in chapter 5 of this thesis.

CHAPTER 11

Overall Analysis

11.1. Introduction

This thesis has examined the role of human, social and organizational capital in the interconnections between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction. The central research question in this thesis was: how does human, social and organizational capital influence the interactions between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction. In addressing this primary question, this thesis attempted to answer the following questions:

How can we explain the interactions between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction?

How can we explain the connections between knowledge workers' perception of HR practices and, human, social and organizational capital?

How can we explain the impact of human, social and organizational capital on knowledge workers' organizational commitment and job satisfaction?

To help in answering these questions, this thesis has followed a case study strategy and a qualitative research approach. Data was mainly collected from two groups of knowledge workers employed within two Canadian-based divisions (denoted in this thesis by SAND and AEROS) of a multinational knowledge intensive firm. The main characteristics of each of these groups of knowledge workers were presented in chapter 7 of this thesis. Chapter 7 has also highlighted the key attributes of SAND and AEROS – including, the features of human, social and

organizational capital within each of these two divisions. Section 11.2 of this chapter will summarize the findings pertinent to the influence of SAND and AEROS informants' perception of HR practices on their organizational commitment and job satisfaction. The summarized results in this section are contrasted with the research framework and expected connections that were presented in chapter 5. Subsequently, section 11.3 will review the findings related to the role of human, social and organizational capital in the connections between SAND and AEROS informants' perception of HR practices and their attitudes. In particular, subsection 11.3.1 will summarize the results pertinent to the influence of SAND and AEROS informants' perception of HR practices on their division's human, social and organizational capital. Moreover, subsection 11.3.2 will outline the findings related to the influence of forms of capital on SAND and AEROS informants' organizational commitment and job satisfaction. Both subsections 11.3.1 and 11.3.2 will contrast their presented findings with the research framework and expected linkages highlighted in chapter 5. In conclusion, section 11.4 provides a comprehensive summary of the key results of this thesis.

11.2. The impact of knowledge workers' perception of HR practices on their organizational commitment and job satisfaction

The next paragraphs present the findings pertinent to the influence of SAND and AEROS informants' perception of HR practices on their organizational commitment and job satisfaction (without accounting for the function of human, social and organizational capital). These results are discussed in line with the expected connections (based on previous research) presented in figure 5.3a in this thesis. Figure 11.1 summarizes the connections (between informants' perception of HR practices and, their organizational commitment and job satisfaction) that were found in SAND and AEROS, and contrasts them with the anticipated linkages that were highlighted in chapter 5.

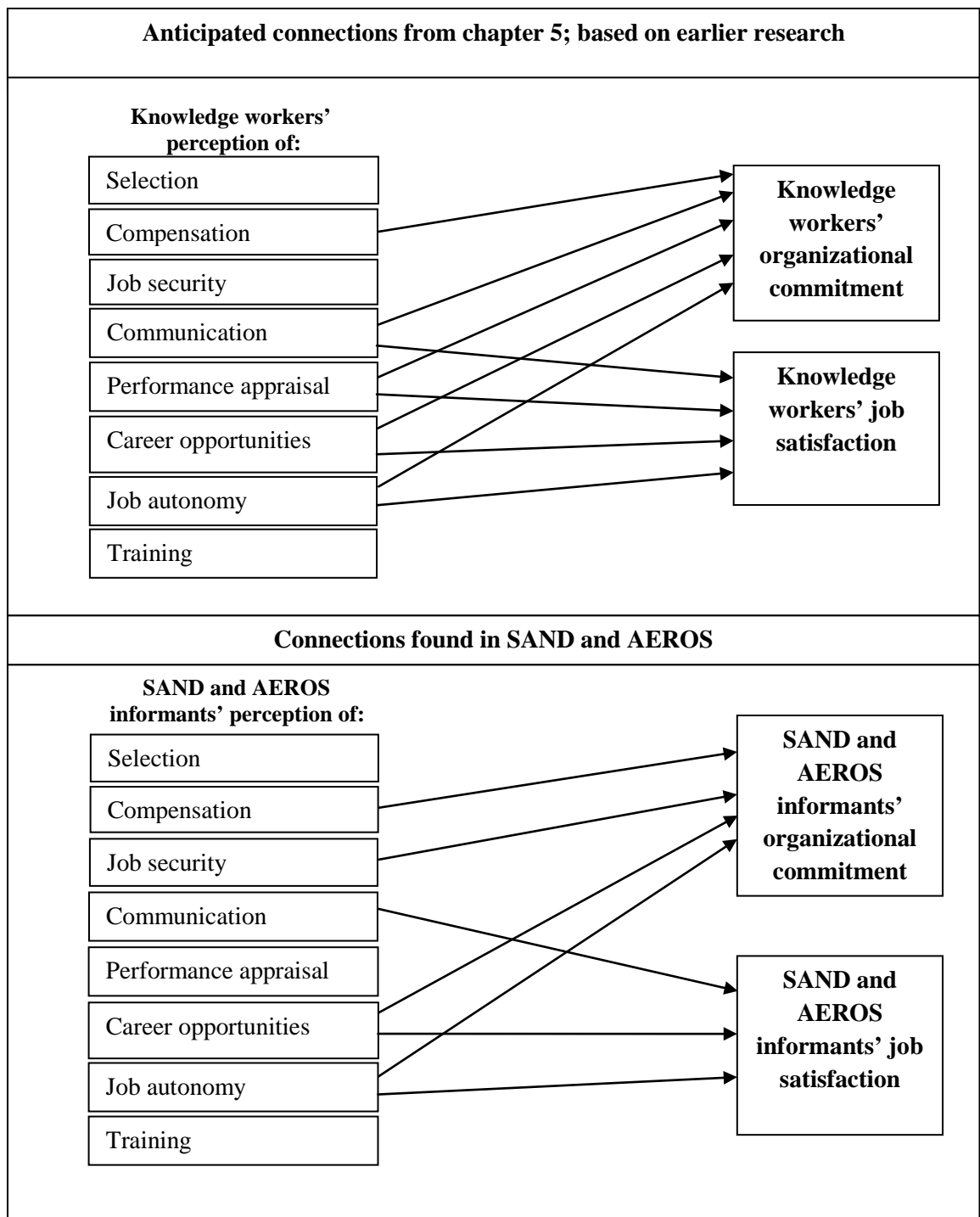


Figure 11.1: The impact of knowledge workers' perception of HR practices on their organizational commitment and job satisfaction – comparing links found in SAND and AEROS with the anticipated connections in chapter 5.

The findings from both SAND and AEROS indicate that informants' perception of selection is not likely to have a direct influence on their organizational commitment and job satisfaction. These results resonate with chapter 5's expectations (lack of connection between perception of selection and knowledge workers' attitudes), and fall in line with earlier research on this employee group

(Horwitz et al., 2003; May et al., 2002). In the HR-attitudes literature, researchers have indicated that selective hiring could influence employees' attitudes, as this practice could support workers' developmental needs by helping in bringing high quality employees inside a firm (Huselid, 1995; Purcell et al., 2003). Nonetheless, there were no indications from SAND and AEROS informants pointing that the mere presence of knowledgeable and highly skilled co-workers can help them in promoting their skills and knowledge. This perhaps might not be very surprising as the sole presence of highly knowledgeable co-workers was not generally described by scholars as playing a central role in the development of knowledge workers (Alvesson, 2000; Horwitz et al., 2003; May et al., 2002; Roberson and O'Malley Hammersley, 2000).

Moreover, the data (from SAND and AEROS) points that informants' perception of compensation could help enhancing their organizational commitment. SAND and AEROS informants have explained that if they perceive that their overall remuneration is notably lower than market standards, then this could make them think of shifting firms, as this could project that they are not valued by their employing company. This finding falls in line with chapter 5's expectations (pointing that when knowledge workers perceive that their compensation is comparable to industry standards this could help enhance their organizational commitment). As well, this result resonates with studies which have claimed that compensation could impact this employee group's commitment (Alvesson, 1993; Horwitz et al., 2003; Purcell et al., 2009). Moreover, this finding is in line with researchers who posited that these employees often recognize the value of their skills and knowledge and consequently, are generally keen on being adequately remunerated in comparison with their industry (Alvesson, 1993, 2000; May et al., 2002; Reed, 1996). In parallel and as anticipated, the results do not point towards a likely connection between SAND and AEROS informants' perception of compensation and their job satisfaction. This might be explained by the little indications in the data pointing towards compensation as being a central job aspiration for informants inside SAND and AEROS (Clark, 1996; Locke, 1976). As mentioned in chapter 5 of this thesis, in conducting their jobs, knowledge workers appear to mostly aspire for their social relationships at work and their job characteristics (Horwitz et al., 2003; Thomson and Heron, 2002).

While knowledge workers' perception of job security was not expected to have a likely link with their attitudes, the findings from SAND and AEROS point that such a perception could impact informants' organizational commitment. These divisions' informants have indicated that their perception of high levels of job security can enhance their organizational commitment, as such perception portrays that their company values the employee's presence in a position of key responsibility and/or values the worker's input into this position. Accordingly, while earlier studies seem to undermine the value of job security for knowledge workers (Arthur and Rousseau, 1996; Reed, 1996), it appears that this HR practice might affect the organizational commitment of knowledge workers holding positions of key responsibility within their firm. In parallel, chapter 5 has argued that knowledge workers' perception of job security is not likely to be connected with their job satisfaction. In line with this argument, the findings from SAND and AEROS indicate that informants' perception of job security is not likely to be linked to their job satisfaction. This was perhaps explained by the existence of little evidence pointing towards job security as being a key job aspiration for SAND and AEROS informants (Clark, 1996; Locke, 1976). As mentioned in the research framework chapter, employment security is generally not among knowledge workers' central job aspirations (May et al., 2002).

As discussed in chapter 5, the examination of previous research leads to argue that when knowledge workers perceive constant top-down company-level communication this can help enhancing their organizational commitment and job satisfaction (Alvesson, 1995; Horwitz et al. 2003; Macky and Boxall, 2007; May et al., 2002; McElroy, 2001). Nonetheless, the data from SAND and AEROS provides little signs of support for a connection between informants' perception of communication and their organizational commitment. These informants have explained that, in their organizational positions, they normally get most of the information on their organization's performance, goals and strategies through informal communication. Therefore, while communication practices could be important for knowledge workers (Alvesson, 1995; Horwitz et al. 2003; May et al., 2002), it appears that due to the positions occupied by SAND and AEROS informants, they often do not need to depend on this practice in order to gather company level information. In relation to job satisfaction, the data from both

divisions points that informants' perception of communication can influence their level of job satisfaction. Informants have explained that perception of strong communication can enhance their job satisfaction, as they view that positive top-down communication could keep their subordinates up-to-date on overall firm strategies and objectives. This might be a significant element in the jobs of SAND and AEROS informants, as these workers have a high level of responsibility over a number of employees and key factors in their division.

Based on insights from earlier studies (Alvesson, 1993; Chang, 2005; Horwitz et al., 2003; Macky and Boxall, 2007), chapter 5 has anticipated that when knowledge workers perceive constructive performance appraisal this can help increase their organizational commitment and job satisfaction. Nonetheless, the findings from SAND and AEROS offer little support for a connection between informants' perception of this practice and these two attitudinal variables. SAND informants have acknowledged that, within their existing team based structure (where there are continuous worker movements amid project teams during the evaluated year), it is rather difficult to obtain objective outcomes from formal yearly evaluation practices. As well, AEROS informants have recognized that within their aerospace nature of work (where concrete outcomes can normally be obtained after long periods of time, generally extending the appraised year), it is often difficult to objectively evaluate a person's performance through formal yearly assessment practices. These acknowledgments appear to be the reason for which SAND and AEROS informants have indicated that they often do not rely on their appraisal practice to evaluate their performance – but mostly on informal talks with peers and supervisors. Therefore, SAND and AEROS informants' perception of performance appraisal is not likely to impact their attitudes because these workers appear to acknowledge that it is difficult for this practice (within the structure of work in SAND and the nature of work in AEROS) to portray how their firm is assessing their job performance.

As described in chapter 5, the examination of previous research leads to argue that when knowledge workers perceive internal career prospects and promotion opportunities based on performance this is likely to enhance their organizational commitment and job satisfaction (Cappelli, 1999; Gartner and Nollen,

1989; Horwitz, et al., 2003; Macky and Boxall, 2007; May et al., 2002). In line with this argument, the results point that SAND and AEROS informants' perception of lateral and/or vertical opportunities in their firm can increase their organizational commitment and job satisfaction. SAND and AEROS informants have mainly explained that this HR practice in their firm can enhance their attitudes as it projects support for the development of their skills and knowledge. Such explanations resonate with the literature on knowledge workers, which highlights the importance of this practice for this employee group – predominantly since knowledge workers often perceive career opportunities as playing a key function in the enhancement of their skills and knowledge (Cappelli, 1999; Horwitz et al., 2003; May et al., 2002). Nonetheless, whereas scholars have emphasized on the significance of promotional prospects for knowledge workers (Horwitz et al., 2003; May et al., 2002), aspirations for such opportunities were mostly depicted amongst younger informants in both divisions (less than 40 years old). Many informants (who were 40 years old or above) seem to seek knowledge growth through lateral rather than vertical career movements. This is because these employees appear to perceive that promotions could increase their work responsibilities and consequently, could have a negative influence on their personal life. Such views resonate with scholars' arguments on adult phases and different career stages (Newell and Dopson, 1996; Super, 1980).

The findings from SAND and AEROS indicate that informants' perception of job autonomy could enhance their organizational commitment and job satisfaction. Such results were expected in chapter 5, as previous research has indicated that job autonomy can be an important element behind knowledge workers' attitudes (Horwitz, et al., 2003; Kinnear and Sutherland, 2000; Purcell et al., 2009; Thomson and Heron, 2002). SAND and AEROS informants have explained that their perception of high levels of job autonomy can increase their organizational commitment, as these perceptions project that their firm trusts their decisions and values their knowledge. Such explanations fall in line with earlier studies, which have claimed that knowledge workers need to feel that their organization is recognizing and valuing their knowledge and expertise (Horwitz et al., 2003; Kinnear and Sutherland, 2000; Thomson and Heron, 2002). In parallel, SAND and AEROS informants have pointed that, job autonomy can increase their job satisfaction, as they aspire for high degrees of autonomy when exerting their

knowledge. This also resonates with earlier studies, which have emphasized that knowledge workers normally seek influence and autonomy when applying their skills and knowledge (Baron and Hannan, 2002; Horwitz et al., 2003; Kinnear and Sutherland, 2000; May et al., 2002; Morris, 2000; Thompson and Heron, 2002).

Chapter 5 did not expect knowledge workers' perception of training to be linked with their work attitudes. In support of this expectation, there were little signs pointing towards a connection between SAND and AEROS informants' perception of training and, their organizational commitment and job satisfaction. Informants in both divisions have mentioned that they do not normally need to rely on training in order to enhance their skills and knowledge. These results fall in line with earlier research, which has claimed that knowledge workers do not generally depend on training to develop their knowledge and expertise (Horwitz et al., 2003; May et al., 2002; Purcell et al., 2009; Thomson and Heron, 2002). Before concluding this section, it is worth noting that the absence of work-life balance as an HR 'practice' in both SAND and AEROS, did not allow this thesis to perform an investigation of the influence of informants' perception of work-life balance on their work attitudes. Therefore, this thesis has little empirical data that is related to the argument made on the work-life balance practice and knowledge workers' attitudes in chapter 5.

11.3. The influence of human, social and organizational capital on the interconnections between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction

Subsection 11.3.1 summarizes the findings pertinent to the impact of SAND and AEROS informants' perception of HR practices on human, social and organizational capital. Moreover, this subsection compares these results with the expected connections that were presented in figure 5.3b in this thesis. Following that, subsection 11.3.2 provides a summary of findings related to the influence of forms of capital on SAND and AEROS informants' organizational commitment and job satisfaction. This subsection compares these results with the anticipated connections that were presented in figure 5.3c in this thesis. The next figure outlines the connections (that were found in SAND and AEROS) elaborated on in subsections 11.3.1 and 11.3.2 and, contrasts these links with the expected linkages that were derived from previous research in chapter 5.

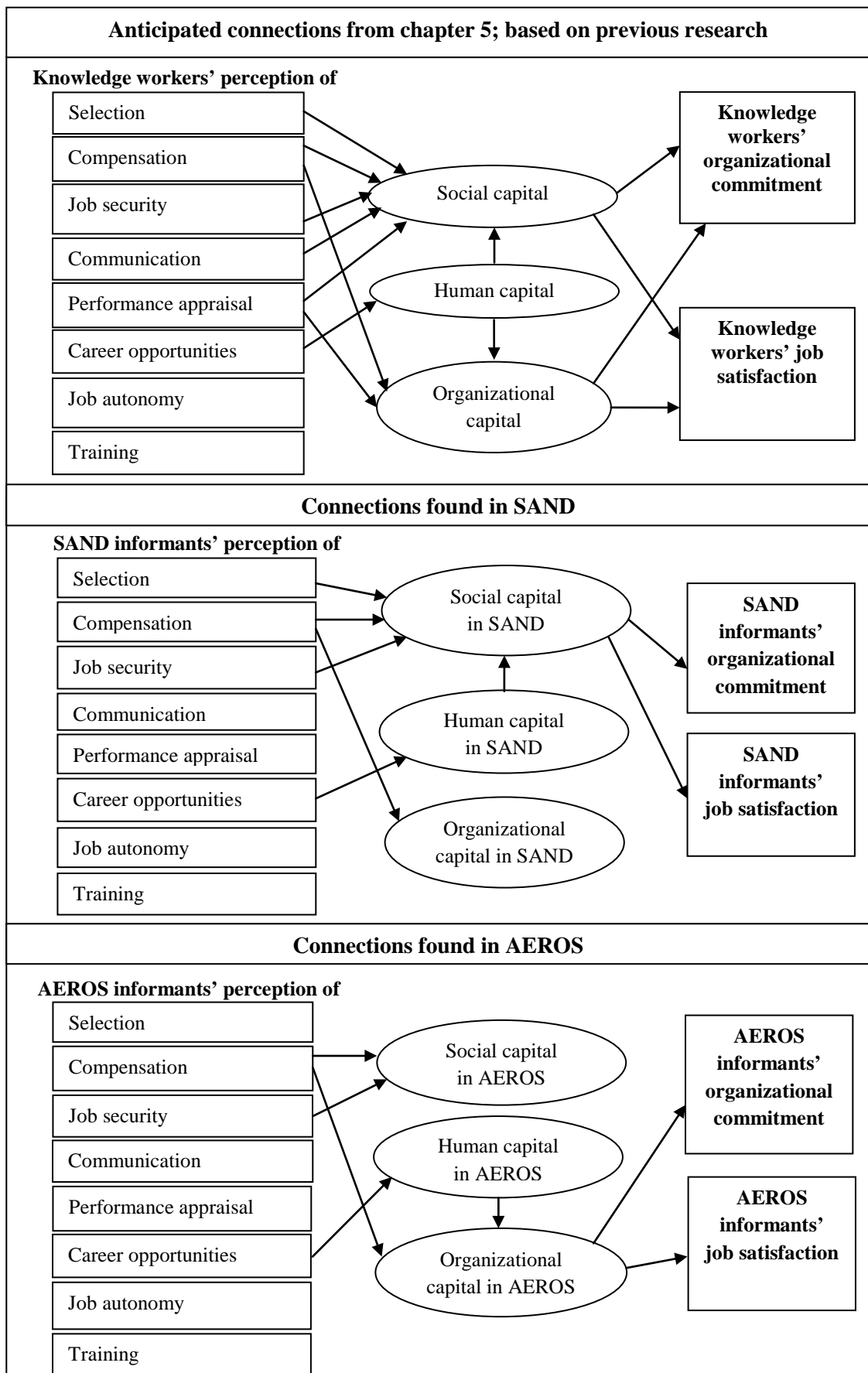


Figure 11.2: The impact of knowledge workers' perception of HR practices on their organizational commitment and job satisfaction, through forms of capital – comparing the links found in SAND and AEROS with the anticipated connections from chapter 5.

11.3.1. The impact of knowledge workers' perception of HR practices on human, social and organizational capital

The findings indicate that SAND informants' perception of selection can help promoting social capital in this division. SAND informants have explained that the focus that exists on group-candidate fit and candidates' values in their selection practice increases their belief in their workforce's integrity and values. Based on earlier studies, chapter 5 has anticipated that knowledge workers' perception of selection (that emphasizes on candidates' values and group-candidate fit) could help building social capital. Scholars have highlighted that selection practices that account for personality, candidates' values and candidate-company fit could assist in building trust amongst organizational members and hence, could help promoting social capital (Bigley and Pearce, 1998; Leana and Van Buren, 1999; McKnight et al., 1998). Conversely, there were no apparent signs of a link between AEROS informants' perception of selection and their division's social capital. In comparison with earlier research (ibid), such a finding is not surprising, as the selection practice in AEROS generally undermines factors such as candidates' values and group-candidate fit (as described in chapter 7).

Moreover, SAND and AEROS informants have indicated that their perception of compensation (as linking the worker's remuneration with overall organizational profits) encourages them to cooperate with their fellow workers. Accordingly, SAND and AEROS informants' perception of compensation appears to help building social capital in their respective divisions. These findings support chapter 5's expected link (between perception of compensation and social capital) and, fall in line with previous research on this contextual element (Ichniowski et al., 1997; Leana and Van Buren, 1999). Interestingly however, the results in this thesis point that SAND and AEROS informants' perception of compensation seems to influence different attributes of collaborative work inside each of these divisions. SAND informants' perception of compensation appears to incentivize them to collaborate with co-workers inside and across teams, while AEROS informants' perception of this practice seems to encourage them to cooperate with employees that are mostly within their team's boundaries. These results could perhaps be explained by the presence of different features of employee interactions between

SAND and AEROS (constant movements of workers between teams in SAND versus employees enclosed in teams for long periods of time in AEROS).

In line with chapter 5's argument pointing that knowledge workers' perception of job security can help building social capital, SAND and AEROS informants' perception of this practice seems to assist in promoting social capital inside these two divisions. These informants have explained that their perception of high degrees of job security enhances their willingness to share common goals with their co-workers. SAND and AEROS informants seem to view job security as a factor that incentivizes them to share non-urgent and/or fairly long-term goals with their fellow workers; as such perception could make them feel that they could be employed in their organization for long periods of time. These results resonate with previous research, which posits that job security can help promoting social capital as it assists in building long-term contracts between co-workers (Dyer and Nobeoka, 2000; Leana and Van Buren, 1999). Nonetheless, the results in this thesis point that SAND informants' perception of job security appears to enhance their will to share common objectives in teams and across teams inside this division. Conversely, AEROS informants' perception of job security seems to mostly increase their willingness to share common goals with employees inside their teams (and not across teams within AEROS). These different results might be explained by the presence of dissimilar features of worker interactions between SAND and AEROS (continuous movements of employees between teams in SAND versus workers enclosed in teams for long periods of time in AEROS).

In parallel and as expected, SAND and AEROS informants' perceptions of training, job autonomy and career opportunities did not appear to have a direct connection with social capital. Conversely, while chapter 5 has argued that knowledge workers' perception of communication and performance appraisal could both influence social capital (Conway, 1999; Kang et al., 2007; Leana and Van Buren, 1999), there were little evidence in both SAND and AEROS to support such connections. The lack of a link between SAND and AEROS informants' perception of performance appraisal and social capital could perhaps be related to evidence showing that these employees generally undermine the role of this practice in their division and often do not depend on it to assess their performance (due to the team

structure in SAND and the nature of aerospace work in AEROS). Moreover, the lack of influence that SAND and AEROS informants' perception of communication seems to have on social capital, might be explained by data indicating that at their organizational level, these employees do not generally rely on their communication practice to get information pertinent to their firm's standards and objectives.

In connection with organizational capital, the findings indicate that SAND and AEROS informants' perception of compensation can help developing their division's organizational capital. These employees have mentioned that their perception of a link between their compensation (the long-term incentive plan) and their role in the development of their firm's knowledge has incentivized them to contribute to their division's organizational capital. These results fall in line with the anticipated link (between perception of compensation and organizational capital) and previous research presented in chapter 5 (Hansen et al., 1999; Youndt and Snell, 2004; Youndt et al., 2004). Interestingly however, the findings in this thesis point that SAND and AEROS informants' perception of compensation is likely to influence rather different elements of organizational capital in each division. SAND informants' perception of compensation seems to affect the development of manuals in this division, whereas AEROS informants' perception of compensation appears to influence the development of manuals, databases and procedures in AEROS. These results might perhaps be explained by the different characteristics of organizational capital that SAND and AEROS possess (as described in chapter 7, SAND is characterized by the presence of knowledge stored in manuals and a lack of databases and procedures, while AEROS encompasses knowledge stored in manuals, databases and procedures).

Whereas the examination of previous research seems to indicate that knowledge workers' perception of performance appraisal could enhance their firm's organizational capital (as argued in chapter 5), the findings of this thesis provide little support for this connection. This might be explained by data indicating that SAND and AEROS informants commonly undermine the function of the performance appraisal practice in their division and generally do not rely on it to assess their performance (again, due to the particular structure of work in SAND and the character of aerospace work in AEROS). In parallel and as anticipated, there

were no signs (in both divisions) of a direct link between informants' perceptions of selection, job security, communication, career opportunities, job autonomy and training, and their division's organizational capital.

Furthermore, in line with the expected connection (knowledge workers' perception of career opportunities can have a role in increasing human capital) and previous studies presented in chapter 5 (Horwitz, 2003; Koch and McGrath, 1996), the findings point that SAND and AEROS informants' perception of career opportunities can assist in developing their division's human capital. These informants have mentioned that their perception of support for employee movements between different positions within their division can encourage them to seek transfers into new jobs and positions. As discussed in chapter 8, such movements seem to help SAND and AEROS informants in enhancing their skills and knowledge (i.e. can help developing these divisions' human capital). In conclusion and as expected, with the exception of career opportunities there were no signs of connections (inside SAND and AEROS) between informants' perception of HR practices and their division's human capital.

11.3.2. The impact human, social and organizational capital on knowledge workers' organizational commitment and job satisfaction

Chapter 5 has argued that elements of social capital could likely help in increasing the organizational commitment and job satisfaction of knowledge workers. The findings of this thesis resonate with this argument in SAND as they indicate that the features of social capital in this division can enhance its informants' organizational commitment and job satisfaction. Conversely, there were little evidence pointing that the characteristics of social capital in AEROS can affect this division's informants' organizational commitment and job satisfaction. SAND's informants have explained that the features of social capital in their division can enhance their attitudes, as these elements can assist them in developing their skills and knowledge. As mentioned in the research framework chapter, the literature on social capital emphasizes that trust, strong employee collaborations and collective work can help workers in advancing their knowledge and capabilities (Dyer and Nobeoka, 2000; Kang et al., 2007; Leana and Van Buren, 1999; Nahapiet and Ghoshal, 1998; Purcell et al., 2009). Moreover,

scholars posit that when workers view that their company is offering them opportunities for knowledge development this could result in employees reciprocating in increased levels of commitment and job satisfaction (Arthur, 1994; Chang 1999, 2005; Gould-Williams, 2004; Purcell et al., 2009). Such prospects could be of particular significance for knowledge workers, as researchers have highlighted the importance of knowledge developmental opportunities for this worker cluster (Alvesson, 1993; Cappelli, 1999; May et al., 2002). On the other hand, while social capital was expected to assist knowledge workers in developing their skills and knowledge, AEROS informants have mentioned that this construct does not play a central role in their knowledge development; and this somewhat explains why social capital does not appear to impact their organizational commitment and job satisfaction (Arthur, 1994; Chang 1999, 2005; Gould-Williams, 2004; Purcell et al., 2009).

Interestingly, there was some evidence in this thesis (while limited) that might perhaps assist in further understanding the results on social capital and, SAND and AEROS informants' attitudes. It seems that the different impact that social capital has on these divisions' informants' attitudes might be further explained by the forms of knowledge that these employees need to depend on their organization to develop. Limited evidence in SAND points that the forms of knowledge that this division's informants normally need to rely on their company to enhance, are best developed through the transfer of: perceptions, viewpoints and/or judgments with their fellow workers. Previous research has characterized these sorts of exchanges as generally including the transfer of tacit knowledge (Boh, 2007; Hansen et al., 1999; Johnson-Laird, 1983; Nonaka, 1994). Moreover, scholars have posited that social capital is often the best medium through which tacit knowledge can be enhanced and transmitted (Boh, 2007; Gertler, 2003; Hansen et al., 1999; Laursen and Mahnke, 2001; Nonaka, 1994; Preece, 2003; Scheepers et al., 2004). Accordingly, the impact of social capital on SAND informants' attitudes might perhaps be affected by the forms of knowledge that these employees need to rely on their firm to develop; which seem to be best advanced through the exchange of tacit knowledge. On the other hand, limited evidence in AEROS indicates that the forms of knowledge that this division's informants generally need to depend on their organization to develop could mostly be assimilated and trusted through access to pertinent information that

is regulated and scripted in a systematic and clear manner, and within specific parameters – in other words, through access to codified knowledge (Boh, 2007; Hansen et al., 1999; Nonaka, 1994). Scholars have claimed that codified knowledge is normally best shared and acquired through a company's organizational rather than social capital (Hansen et al., 1999; Subramaniam and Youndt, 2005; Youndt et al., 2004). Therefore, as the forms of knowledge that AEROS informants need to depend on their firm to develop might be best enhanced through access to codified information, organizational capital might be more significant for these employees than social capital. This could perhaps explain further the lack of a connection between social capital and, AEROS informants' organizational commitment and job satisfaction.

In relation to organizational capital, chapter 5 has argued that this contextual factor could likely help increasing the organizational commitment and job satisfaction of knowledge workers. The results of this thesis offer support for this argument in AEROS, as they point that the attributes of organizational capital in this division can enhance its informants' organizational commitment and job satisfaction. Conversely, there were little signs in the data indicating that the features of organizational capital in SAND can impact this division's informants' organizational commitment and job satisfaction. AEROS informants have explained that the effect of organizational capital on their attitudes is related to the knowledge enhancement prospects that the features of this contextual element in AEROS can offer. Scholars have posited that the existence of extensive knowledge and information within a firm's manuals, procedures and databases can assist workers in developing their expertise and knowledge (Katila and Ahuja, 2002; Lyles and Mitroff, 1980; Martin and Mitchell, 1998; Subramaniam and Youndt, 2005; Youndt et al., 2004). Furthermore, researchers have indicated that when employees perceive that their firm is offering them opportunities for knowledge growth this could help increasing their work attitudes (Arthur, 1994; Chang 1999, 2005; Gould-Williams, 2004; Purcell et al., 2009). Such prospects could be of high importance for knowledge workers, as this worker cluster is normally keen on developing its skills and knowledge (Alvesson, 1993; Cappelli, 1999; May et al., 2002). Conversely, while it was anticipated that organizational capital can help knowledge workers in advancing their knowledge, SAND informants have pointed that they do not generally need to

rely on organizational capital to enhance their knowledge and abilities; which could explain why this contextual factor is not likely to impact their work attitudes (Arthur, 1994; Chang 1999, 2005; Gould-Williams, 2004).

Interestingly, there was some evidence in the data (even though limited) that might perhaps help in further understanding the findings on organizational capital and, SAND and AEROS informants' attitudes. It appears that the diverging influence of organizational capital on these divisions' informants' attitudes might be further explained by the forms of knowledge that these workers need to rely on their firm to develop. Limited evidence in AEROS points that the forms of knowledge that this division's informants generally need to depend on their company to develop can mostly be assimilated and trusted through access to pertinent information that is regulated and scripted in a systematic manner and, within set parameters (i.e. through access to codified knowledge) (Boh, 2007; Hansen et al., 1999; Nonaka, 1994)). Scholars posit that codified knowledge is generally best shared and acquired through a company's organizational capital (Hansen et al., 1999; Subramaniam and Youndt, 2005; Youndt et al., 2004). Accordingly, the influence of organizational capital on the attitudes of AEROS informants might perhaps be affected by the forms of knowledge that these workers need to rely on their firm to advance; which seem to be best enhanced through access to codified information that is not easily found outside of this division. On the other hand, limited evidence in SAND indicates that the forms of knowledge that this division's informants normally need to rely on their firm to enhance can be best developed through the exchange of perceptions, viewpoints and/or judgments with their fellow workers. Researchers posit that these types of exchanges generally encompass the transfer of tacit knowledge (Boh, 2007; Hansen et al., 1999; Johnson-Laird, 1983; Nonaka, 1994). Furthermore, the literature claims that tacit knowledge is normally best exchanged through social capital rather than codified documentation (Boh, 2007; Gertler, 2003; Hansen et al., 1999; Laursen and Mahnke, 2001; Nonaka, 1994; Preece, 2003; Scheepers et al., 2004). Accordingly, as the forms of knowledge that SAND informants need rely on their firm to enhance might be best developed through the transfer of tacit knowledge, social capital might be more significant for these employees than organizational capital. This might perhaps further explain the lack of a connection between organizational capital and this division's informants' attitudes.

In relation to human capital, there were no notable signs in the data (inside both divisions) pointing towards a direct connection between this contextual element and informants' attitudes. However, the findings in this thesis indicate that human capital could have an indirect influence on SAND and AEROS informants' organizational commitment and job satisfaction (through the influence of human capital on social capital in SAND and the impact of social capital on this division's informants' attitudes, and, through the influence of human capital on organizational capital in AEROS and the impact of organizational capital on this division's informants' attitudes). SAND informants have mentioned that the firm-specific knowledge and experience that many employees possess in this division have helped promoting collective work and have facilitated the understanding of common objectives. These results fall in line with the expectations (human capital can help developing social capital) and previous research discussed in chapter 5 (Brown and Duguid, 2001; Cicourel, 1973; Kang et al., 2007; Nahapiet and Ghoshal, 1998). In parallel, AEROS informants have stated that they normally contribute with their experience and knowledge to their division's database, procedures and manuals. These findings provide support for the anticipations (human capital can help developing organizational capital) and the earlier studies presented in the research framework chapter (Hansen et al., 1999; Youndt and Snell, 2004; Youndt et al., 2004).

After discussing the linkages between informants' perception of HR practices and forms of capital and, the connections between these contextual variables and informants' attitudes, the next section will present a comprehensive summary of this thesis's main findings.

11.4. Summary of findings

As presented in figure 11.1, the findings of this thesis indicate that, in both divisions, informants' perceptions of compensation, job autonomy, job security and career opportunities are likely to directly enhance their organizational commitment and, informants' perceptions of career opportunities, communication and job autonomy are likely to directly increase their job satisfaction. The outcomes point that the main characteristics of informants in both divisions (primarily their knowledge worker nature and, to some extent their presence in positions of key responsibility) have

helped shaping the linkages between their perception of HR practices and their work attitudes. However, as illustrated in figure 11.2, the central findings in this thesis also indicate that a consideration of the role of forms of capital has helped revealing additional mechanisms that could link SAND and AEROS informants' perception of HR practices to their work attitudes. In particular, SAND informants' perceptions of selection, compensation and job security seem to indirectly enhance their organizational commitment and job satisfaction, through social capital – as these perceptions could help developing social capital in SAND and, social capital in this division can increase its informants' attitudes. Furthermore, SAND informants' perception of career opportunities appears to indirectly enhance their organizational commitment and job satisfaction, as this perception can develop this division's human capital and SAND's human capital can help building its social capital. On the other hand, AEROS informants' perception of compensation can indirectly increase their organizational commitment and job satisfaction, through organizational capital – as this perception can assist in the development of organizational capital in AEROS and organizational capital in AEROS can enhance this division's informants' attitudes. Moreover, AEROS informants' perception of career opportunities appears to indirectly increase their organizational commitment and job satisfaction, as this perception can develop this division's human capital and human capital in AEROS can assist in building its organizational capital. The outcomes of this thesis indicate that the characteristics of forms of capital that are in existence within each of the two divisions, appear to help shaping these indirect linkages between perception of certain HR practices and attitudes inside each case. Interestingly as well, there were some indications in the data (while limited) which pointed that, these indirect interconnections between SAND and AEROS informants' perception of HR practices and their work attitudes, might perhaps be also be reliant on the forms of knowledge that SAND and AEROS informants need in their jobs, and mainly which of these forms of knowledge these employees have to depend on their organization to develop.

11.5. Conclusion

Subsequent to presenting the data analysis, the next chapter will conclude this thesis by discussing how the findings and outcomes of this thesis can contribute to the

literature – particularly towards the body of knowledge onto ‘why’ and ‘how’ human resource management can influence workers’ organizational commitment and job satisfaction. Moreover, the next chapter will consider this thesis’s implications for methods and practice and, will present this thesis’s main limitations.

CHAPTER 12

Implications and conclusion

12.1. Introduction

This chapter concludes this thesis by discussing its key contributions for theory and future research. Moreover, this chapter provides the main implications of this thesis for research methods and for industrial practitioners. Following that, the chapter exhibits the limitations of this thesis and closes with a brief concluding section.

12.2. Implications for theory

The main findings outlined in chapter 11 indicate that the examination of human, social and organizational capital has provided further insights into the connections between SAND and AEROS informants' perception of HR practices and their attitudes. These outcomes help supporting this thesis main argument, that a consideration of factors from the context within which workers operate can deepen the understanding of the impact of HR practices on employees' organizational commitment and job satisfaction. Moreover, this thesis's central findings can contribute to the body of knowledge on 'why' and 'how' HR practices can influence employee attitudes. While earlier research claims that examining the implementation of HR policies in practice and workers' perception of HR practices could offer further insights into the HR-attitudes connection, there was little consideration in the literature for the context within which employees operate. Accordingly, the key outcomes of this thesis contribute to the understanding of the HR-attitudes link, by pointing that factors from the context within which workers operate could have a role in the influence of perception of HR practices on employee attitudes. This implies that, in addition to studying workers' perception of HR practices, researchers onto the HR-attitudes link need to account for factors from the context of workers' employing firms, in order to have a more thorough understanding of this connection. The following paragraphs will elaborate on the implications of this thesis on research into the HR-attitudes connection.

The outcomes of this thesis have indicated that perceptions of selection, compensation and job security could have an indirect impact on attitudes, through their role in promoting social capital. Moreover, perception of compensation could have an indirect impact on attitudes, through its influence on the development of organizational capital. As well, perception of career opportunities could have an indirect impact on attitudes, through its effect on a firm's human capital. Accordingly, while there is little research on the function of contextual factors in the HR-attitudes link, this thesis offers more knowledge onto this connection by pointing that workers' perceptions of certain HR practices could have an indirect impact on their attitudes, through the influence of these perceptions on elements from the context where employees are operating. This implies that perception of a certain HR practice might still affect employee attitudes (indirectly, through its influence on one or more factors from the context of workers' employing firm), even if this perception does not necessarily have a direct impact on attitudes. For example, if perception of selection was not found to have a direct influence on employee attitudes, this perception could still indirectly impact attitudes, through social capital. Moreover, the examination of contextual factors could reveal different routes through which perception of some HR practices can impact workers' attitudes. For instance, while perception of compensation could be found to directly impact employees' commitment, perception of this practice could as well, have an indirect influence on workers' organizational commitment, through its possible role in promoting social and/or organizational capital inside an organization. Therefore, accounting for factors from the context of workers' employing firm could provide further insights on the mechanisms linking perception of HR practices and employees' work attitudes.

While the outcomes of this thesis can add to the HR-attitudes literature by indicating that perception of certain HR practices can impact attitudes through elements from the context where employees operate, these results particularly point that the features of these contextual factors can help shaping these indirect connections. The findings in this thesis indicate that the attributes of a form of capital inside an organization might affect how employees' perception of a certain HR practice can influence this form of capital. Moreover, the results in this thesis point that the features of this form of capital can help shaping its impact on workers'

attitudes. Therefore, the characteristics of forms of capital could affect how perception of certain HR practices can indirectly impact workers' attitudes, through these forms of capital. This implies that the influence of perception of certain HR practices on attitudes might vary for employees operating in firms who have different features of forms of capital. Accordingly, future research needs to consider the attributes of the context of workers' employing firms, as employees' perception of HR practices might impact their attitudes in different ways, between companies that have contextual factors with dissimilar characteristics.

Moreover, previous research has emphasized the importance of worker groups' attributes in shaping the interconnections between perception of HR practices and attitudes (Kinnie et al., 2005; Purcell et al., 2009). While the outcomes of this thesis give additional support for this argument, there are indications in this thesis (while limited) which might provide more knowledge on the function of employee groups' features in affecting the perception of HR-attitudes link. The results in this thesis have pointed that an employee group's attitudes seem to be enhanced by the features of social capital in its firm (and the attributes of organizational capital in its company appear to have little impact on its attitudes) while another worker cluster's attitudes do not seem to be influenced by the characteristics of social capital in its organization (and the features of organizational capital in its firm appear to enhance its attitudes). Even though limited, findings in this thesis have to some extent explained this diverging influence of contextual variables between these two groups. It seems that some different characteristics that each of these two clusters possess might have affected the impact of social and organizational capital on their attitudes. Accordingly, while these two groups' perception of certain HR practices was found to have a likely impact on social and organizational capital in their firms, the different influence of these forms of capital on the attitudes of these two clusters (due to their diverging features) has resulted in dissimilar mechanisms through which perception of HR practices can affect attitudes, amid these two groups. This indicates that the impact of a contextual factor on the linkages between perception of HR practices and attitudes might be influenced by some characteristics of employee groups. Therefore, whereas previous research has highlighted that the features of worker groupings could provide deeper

insights onto the HR-attitudes connection (Kinnie et al., 2005; Purcell et al., 2009), this thesis adds that even more insights on this link could be gathered if future research considers both the attributes of worker clusters and factors from the context within which employees operate. By doing so, upcoming studies might be able to further understand ‘why’ and ‘how’ worker groups with dissimilar characteristics could have different HR-attitudes linkages.

In addition to providing further knowledge into the HR-attitudes connection, the outcomes of this thesis can offer more support for earlier arguments on these linkages. The data in this thesis indicates that written policies are not necessarily enacted as they are within organizations, or sometimes not implemented at all. This confirms earlier claims on the importance of accounting for the implementation of HR policies in practice when examining the HR-attitudes connection (Guest et al., 2004; Kinnie et al., 2005; Wright and Nishii, 2004). Moreover, the findings in this thesis offer additional support for studies that have advocated for the necessity to account for workers’ views or perceptions of HR practices, when investigating the impact of human resource practices on employee attitudes (Bowen and Ostroff, 2004; Kinnie et al., 2005; Macky and Boxall, 2007; Purcell et al., 2003). The examination of informants’ perception of HR practices has offered deeper insights into the influence of HR practices on their organizational commitment and job satisfaction. In particular, the results in this thesis have pointed that the impact of HR practices on employee attitudes is likely to be dependent on how the worker view these practices; in terms of projecting how the organization values the employee, the firm’s support for the development, wellbeing and/or job aspirations of the worker and/or, the company’s commitment towards the employee (Chang, 2005; Eisenberger et al., 1990; Hutchison and Garstka, 1996; Shore and Wayne, 1993; Wayne et al., 1997). Moreover, the result indicating that the characteristics of the studied employees in both cases (mainly their knowledge workers’ nature and, to a certain extent their existence in positions of key responsibility) seem to help shaping the direct linkages between their perception of HR practices and their work attitudes, also provides more support for recent scholars’ claims. Mainly, that features of a worker group can help in further understanding the impact of perception of HR practices on employee attitudes (Kinnie et al., 2005; Purcell et al., 2009).

In parallel, whilst the impact of human resource management on knowledge workers in KIFs has not been thoroughly investigated, the outcomes of this thesis can support emerging theorizations pertinent to this area and can offer some additional insights into this link.

The findings in this thesis indicate that knowledge workers' perceptions of compensation, job security, job autonomy and career opportunities are likely to impact their organizational commitment and, knowledge workers' perceptions of communication, career opportunities and job autonomy are likely to influence their job satisfaction. The results pertinent to the impact of perception of compensation and job autonomy on the attitudes of knowledge workers seem to support earlier studies, which have emphasized on the importance of remuneration and autonomy for this employee group (Alvesson, 1993, 1995; Baron and Hannan, 2002; Horwitz et al., 2003; Morris, 2000; Purcell et al., 2009; Thompson and Heron, 2002). Moreover, the findings on the impact of career opportunities on the attitudes of knowledge workers can confirm researchers' claims on the significance of this practice for this worker cluster (Cappelli, 1999; Horwitz, et al., 2003; May et al., 2002). Interestingly however, while earlier research has particularly emphasized on the importance of promotional prospects for knowledge workers (Horwitz, et al., 2003; May et al., 2002), the outcomes of this thesis seem to indicate that rather older knowledge workers, who have achieved positions of key responsibility inside their organization, might be interested in horizontal movements between job positions more than promotional opportunities up the hierarchy; as these employees appear to somewhat avoid additional work responsibilities that can impact their personal life. Moreover, while earlier studies normally undermine the importance of job security for knowledge workers (Arthur and Rousseau, 1996; Reed, 1996) this thesis has found that the organizational commitment of knowledge workers who are in positions of key responsibility might perhaps be enhanced by perception of high levels of job security. This is because such knowledge workers might need to feel that their firm recognizes the importance of their presence in such positions and consequently, is keen on retaining them.

Moreover, as there is little research on the role of forms of capital in the HR-attitudes link for knowledge workers, the central outcomes of this thesis can offer

interesting insights for research on this connection. The findings in this thesis indicate that knowledge workers' perception of certain HR practices could have an indirect impact on their attitudes, through human, social and organizational capital. Hence, the examination of forms of capital could help revealing additional mechanisms through which knowledge workers' perception of HR practices can be linked to their work attitudes. Furthermore, the results in this thesis point that the features of forms of capital in a KIF can help shaping the processes linking knowledge workers' perception of HR practices to their attitudes through these contextual factors. This implies that future research on the HR-attitudes connection for knowledge workers, needs to perform an in-depth examination of the characteristics of KIFs (Purcell et al., 2009), mainly the features of human, social and organizational capital inside these companies. This is because, if the characteristics of human, social and organizational capital can differ between organizations then the impact of knowledge workers' perception of HR practices on their work attitudes might as well, vary between these firms.

In addition, there were findings in this thesis (even though limited) indicating that the role of forms of capital in the impact of knowledge workers' perception of HR practices on their attitudes, might depend on the forms of knowledge that these employees need to rely on their firm to advance. These findings imply that it might be important for future research to have a thorough understanding of the characteristics of knowledge workers when studying their HR-attitudes connection. This implication falls in line with Purcell et al's (2009) work, which emphasizes on the significance of understanding the attributes of knowledge workers when investigating the impact of HRM inside knowledge based settings. This implication as well, resonates with Lepak and Snell's (2007) claims, which highlight the need to examine the type of knowledge that workers' possess, when investigating the role of HRM in knowledge based companies. The outcomes of this thesis nonetheless, go further by pointing that, in studying the HR-attitudes link for knowledge workers, it might not be sufficient to just understand the type of knowledge that knowledge workers' groups own, but it might be important to also examine the forms of knowledge that these employees seek to advance and, more particularly, the extent to which these workers need to rely on their firm for developing these forms of knowledge. This falls back into the debate on the dependence of knowledge workers

on their employing organizations (Alvesson, 2000; Frenkel et al., 1999; Gibbons et al., 1994; May et al., 2002; Reed, 1996). While some scholars argue that knowledge workers can possess a strong knowledge foundation that can greatly reduce their reliance on their firm for knowledge development (Reed, 1996), this thesis's outcomes support counterarguments which posit that this employee group might still need to rely on its organization for developing certain forms of knowledge (Gibbons et al., 1994; May et al., 2002). This thesis moreover indicates that, it might be important for upcoming studies to have an in-depth understanding of the specific forms of knowledge that knowledge worker groups could need to depend on their organization to advance. This is because, it might be that if different groups of knowledge workers rely on their firm to develop different forms of knowledge, then the perception of HR practices-attitudes connection might vary amongst these groups; due to the role of forms of capital. In other words, if a knowledge worker group needs to rely on its firm to develop forms of knowledge that are best advanced through the transfer of tacit knowledge, and another group needs to depend on its firm to enhance forms of knowledge that are mostly developed through access to codified information, then the HR-attitudes link for these two groups might vary; due to the different functions that forms of capital might have in the HR-attitudes connection of these two clusters.

In the end, the outcomes of this thesis can provide some insights onto the influence of human resource management on knowledge assets, knowledge development and knowledge strategies inside KIFs. The findings in this thesis indicate that there could be different HR practices that can be connected to the development of different forms of capital. Such findings offer additional support for scholars who have studied the impact of diverse HR configurations on forms of capital (Youndt and Snell, 2004; Youndt et al., 2004). Interestingly, if future research offers more support for the claim that human, social and organizational capital can have a different impact on the development of diverse forms of knowledge, then scholars could produce combinations of HR practices that could be related to the development of different forms of knowledge inside KIFs. This in turn, might as well, help linking human resource management to various knowledge strategies. For instance, firms could be adopting personalization strategies (exchange

of knowledge between individuals) or codification strategies (transferring knowledge from individuals to documents) (Boh, 2007; Hansen et al., 1999). Accordingly, by examining combinations of HR practices that could help promoting different forms of knowledge, future research might offer valuable insights that could help in connecting sets of HR practices with personalization and codification strategies. This could then, help adding onto the rising research on HRM and knowledge strategies, which posits that the implementation of HR practices can vary with the features of knowledge strategies employed by organizations (Laursen and Mahnke, 2001).

12.3. Implications for methods

The implications of this thesis suggest some methodological strategies that could be adopted in future studies into the HR-attitudes literature. Particularly, the case study approach played a central role in the realization of this thesis's main findings. After all, it was this methodological perspective that enabled the understanding of the contexts of the two studied divisions – which offered key insights onto the function of different forms of capital in the HR-attitudes connection. Therefore, researchers can add to the HR-attitudes literature if more context-specific studies are conducted using case study methodological strategies. Such approaches could be more helpful than cross-sectional methods in collecting data on firm-specific contextual characteristics that can shape particular worker groupings' attitudes.

Furthermore, this thesis was able to capture likely reasons behind the HR-attitudes linkages for knowledge workers by the means of adopting a qualitative research design. Such qualitative approach seems to assist in collecting more in-depth data on the features of employees (such as their aspirations, type of knowledge etc.), which appears to be important in the understanding of the HR-attitudes connection. This implies that future developments might add to the body of knowledge into the HR-attitudes link if more qualitative perspectives are undertaken (Purcell et al., 2003). These could serve studies attempting to understand 'why' and 'how' HRM can be linked to employee attitudes; such as organizational commitment and job satisfaction.

In addition to that, as this thesis is highlighting the importance of employees' reactions to HRM, it supports previous claims that data collection methods should examine the HR-attitudes link by asking for the perception of those very employees that are directly affected by HR practices (Kinnie et al., 2005; Purcell et al., 2003). In parallel, while this thesis has provided theoretical inputs with regard to the importance of forms of capital in the HR-attitudes link, future work could help further advance the body of knowledge in this area, if sophisticated statistical approaches were conducted. These could add to the literature, by producing representative statistics and generalizable findings onto the function of forms of capital within the HR-attitudes connection.

12.4. Implications for practice

This thesis could have implications for managers and HR practitioners. This thesis indicates that the impact of HR practices on employees could be affected by the features of these workers and the characteristics of elements in the context within which they operate. Accordingly, in their HRM designs, managers need to account for the main features of their workers and the attributes of the context within which these employees are working. This implies that, in firms that employ different employee groups and/or where workers operate in settings that have different contextual features, managers would need to have a differentiated approach to human resource management. However, this can pose a dilemma to managers who are seeking to design human resource management strategies within organizations. In effect, personnel practitioners often need to apply a general HR approach, through which a firm's entire workforce can relate with the company's direction and principles (Purcell et al., 2003). Moreover, corporations normally face ethical and legal obligations to equally treat various types of employees (Boxall and Purcell, 2003). In that regard, Purcell et al., (2009) indicate that disparities in treatments could be problematic, especially for HR practices such as compensation and promotions. Furthermore, Lepak and Snell (2007) claim that differences in human resource approaches within a firm can have negative outcomes amongst employees that are operating inside the same division or within close organizational boundaries. Fortunately, Lepak and Snell (2007) and Purcell et al. (2009) suggest means through which managers could surmount the above practical issue of shaping HR designs for

different employee groups. They indicate that firms could adopt a list of human resource practices that are internally consistent across the workforce, as well as use other practices that target specific worker groupings (Lepak and Snell, 2007; Purcell et al., 2009). Therefore, an organization could implement common HR practices that are designed to influence all employees as well as other HR practices that are directed towards specific employee groups and/or particular contexts. This could limit ethical and legal issues, enhance the work attitudes of the general workforce and also serve the characteristics of particular worker groups and organizational contexts.

The outcomes of this thesis could as well, have implications for practitioners who are designing human resource management inside knowledge based organizations. As indicated previously in this thesis, the impact of HR practices on knowledge workers could be particularly important for such types of firms, as these employees' attitudes can be vital for a KIF's success and competitiveness (Alvesson, 1995, 2000). Firstly, this thesis points that, in managing their knowledge workers, practitioners inside KIFs need to focus on HR practices that recognize the value of their core workers' knowledge, that help these key personnel in developing their knowledge and that provide these workers with high degrees of freedom in applying their knowledge. Secondly, conventional human resource approaches that solely focus on a KIF's human capital do not appear to be sufficient for the management of knowledge workers inside knowledge based companies (Purcell et al., 2009). Managers need to adopt new approaches in which they account for human, social and organizational capital (ibid). Moreover, managers might need to consider the forms of knowledge that their core workers seek to advance. This could enable practitioners to realize what forms of capital can be most needed by their knowledge workers. Subsequent to identifying these forms of capital, practitioners could then incorporate in their HRM design, practices that could help building these apparently needed forms of capital.

12.5. Limitations

There are limitations pertinent to the generalizability of the results presented in this thesis. This thesis was conducted within two Canadian-based settings of a large multinational KIF, and targeted knowledge workers operating in positions of key

responsibility within the boundaries of the investigated settings. Therefore, the produced findings cannot be generalized across samples of knowledge workers. As well, replicating this research within different and/or smaller settings, as well as various countries might offer contrasting results into the HR-attitudes link for these workers. This being said however, the conclusions of this thesis aim at offering theoretical insights into the HR-attitudes link, rather than providing representative results for a particular population.

Another limitation to this thesis is that more focused questions pertinent to some areas related to the role of forms of capital were asked in the second interview round. Fortunately, the large number of informants and the many open-ended questions asked in the first phase of interviews have resulted in many discussions that have provided interesting insights on these issues. These insights along with the data collected from the second interview round have greatly assisted in the data analysis of the function of human, social and organizational capital in between perception of HR practices and attitudes. Accordingly, despite that more focused questions were addressed in the second round of interviews, this factor did not seem to have a major influence on the quality of this thesis's main outcomes. However, as mentioned in this chapter and in the analytical episodes, an important limitation in this thesis is that of the impact of employees' forms of knowledge on the role of context in between perception of HR practices and attitudes. The data on the forms of knowledge that employees needed to depend on their firm to develop, were by large present in the transcripts of the second round of interviews. Moreover, this thesis did not have enough insights on the role of social capital in developing forms of knowledge that can be best advanced through the transfer of tacit knowledge (nor the function of organizational capital in developing forms of knowledge that could be best enhanced through access to codified information). Nonetheless, despite being limited, these findings on the influence of forms of knowledge on the role of context in the HR-attitudes link appear to open some interesting windows to be explored by future researchers.

Moreover, while the results in this thesis point that human capital can have a likely impact on, social and organizational capital, this thesis acknowledges that these latter two contextual variables can also have an impact on human capital (by

assisting in the development of workers' knowledge). Nonetheless, this reverse connection does not directly fall into the central aim of this thesis, which is more directed towards the linkages going from perception of HR practices towards attitudes (for instance: perception of HR practices to human capital to social capital to attitudes, rather than perception of HR practices to social capital to human capital). As well, the findings in this thesis indicate that social and organizational capital can influence knowledge workers' attitudes. However, it could be argued that employees' attitudes can as well, impact the development of social and organizational capital. Again, this thesis does not argue that this reverse connection is not likely to be present. Yet, as just explained, the purpose of this thesis is more directed towards the impact of forms of capital on attitudes rather than the opposite direction.

Furthermore, the limited number of examined cases might have allowed for a more in-depth and focused approach in the data collection and analysis process. However, this has limited the possibilities of contrasting results across more than two settings. A comparison of findings across three or more cases might have enabled a more widespread examination of the characteristics of contextual factors, such as: investigating how different features of contextual elements between firms can impact the attitudes of similar knowledge worker groups.

On another front, the main data collection in this thesis was achieved through telephone interviews, which could be argued as limiting a close-up view of the investigated employees in comparison with face-to-face interviewing. Yet, as discussed in Chapter 6, the quality of this approach has been supported in the literature, and this strategy was mainly adopted to attempt and increase the number of informants. In effect, the researcher was able to interview a relatively large number of informants which, coupled with these informants' high enthusiasm and, the extensive information and documentation provided by senior management, has resulted in a dense set of qualitative information.

In the end, like most research endeavors and particularly qualitative approaches, concerns for research bias will always be present for the investigator as well as the reviewers. In relation to that, the researcher has attempted to limit this

thesis's bias by walking a thin line between enquiring on events that serve best the research questions and attempting not to direct the conversations with informants based on personal intuitions. In addition, the findings of the first round of interviews were corroborated in a face-to-face meeting with HITEC's corporate management. As well, following Miles and Huberman's (1994) recommendations, counting was employed in order to reduce personal insights into the data analysis process.

12.6. Conclusion

Previous research has emphasized the importance of conducting thorough examinations of the HR-attitudes connection, mainly the linkages between employees' perception of HR practices and, their organizational commitment and job satisfaction (Appelbaum et al., 2000; Gerhart, 2005; Macky and Boxall, 2007; Meyer and Smith, 2000; Purcell et al., 2003, 2009; Whitener, 2001). While there is little knowledge in the literature on the function of contextual factors in the linkages between HR practices and attitudes, this thesis has argued that a consideration of factors from the context within which workers operate can deepen the understanding of the impact of HR practices on employees' organizational commitment and job satisfaction. As organizations can encompass numerous contextual elements, this thesis has focused on human, social and organizational capital. While these forms of capital were rarely accounted for in HR-attitudes research, the examination of previous studies has provided some indications that seem to lead towards a possible function that these contextual factors could have in the HR-attitudes connection (Leana and Van Buren, 1999; Youndt and Snell, 2004; Youndt et al., 2004).

Since the attitudes of knowledge workers inside KIFs appear to be vital for the success of such types of firms (Alvesson, 1995), this thesis was interested in examining the function of context, in the perception of HR practices-attitudes connection for knowledge workers employed in knowledge intensive firms. Mainly, this thesis has examined how human, social and organizational capital can impact the interconnections between knowledge workers' perception of HR practices and, their organizational commitment and job satisfaction. In reaching this objective, this thesis has followed a case study strategy and a qualitative research approach. Data was primarily gathered from two groups of knowledge workers who are employed in

positions of key responsibility, inside two Canadian-based divisions of a multinational knowledge intensive organization.

The central outcomes of this thesis have pointed that, knowledge workers' perception of certain HR practices can indirectly influence their attitudes through forms of capital. This thesis highlights that the features of forms of capital can help shaping these indirect connections. Interestingly as well, there were limited findings in this thesis indicating that these indirect interconnections can also depend on some characteristics that knowledge worker groups could have (mainly, the forms of knowledge that knowledge worker groups need to rely on their organization to advance).

As described in this chapter, these outcomes can contribute towards the literature on the HR-attitudes connection. In particular, the results of this thesis can provide more knowledge into 'why' and 'how' HR practices can influence workers' attitudes.

APPENDIX A

First Round: INTERVIEW GUIDE

Date:

Case:

Remember to ensure confidentiality!

Name of Informant: confidential (tag _ _ _)

Gender of Informant:

- ☐ Male
- ☐ Female

Section 1: About yourself and your job

How many years in total have you been working for Company?

- ☐ Less than a year
- ☐ 1 to less than 2 years
- ☐ 2 to less than 5 years
- ☐ 5 to less than 10 years
- ☐ 10 years or more

How many years in total have you been working in your current job?

- ☐ Less than a year
- ☐ 1 to less than 2 years
- ☐ 2 to less than 5 years
- ☐ 5 to less than 10 years
- ☐ 10 years or more

Do you work full time or part time?

- ☐ Full time
- ☐ Part time

How old are you?

What are your qualifications (studies, experience, etc.)?

What is your job title?

Can you briefly describe what your job entails?

Do you have employees that report to you? If yes, what type of employees report to you? And how many?

What responsibilities do you have for people management?

Now I am going to ask you about your experience at work

Explain the scale

Elaborate on survey answers (such as why do you say so?)

My job is challenging

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree
- Don't know

How satisfied are you with the sense of achievement you get from your work?

- Very satisfied
- Satisfied
- Neither satisfied nor dissatisfied
- Dissatisfied
- Very dissatisfied
- Don't know

How satisfied are you with the amount of influence you have over your job?

- Very satisfied
- Satisfied
- Neither satisfied nor dissatisfied
- Dissatisfied
- Very dissatisfied
- Don't know

Section 2: The Human Resource Practices

Now I want to ask your views on particular HR practices (inform the informant about the point scale)

Note: expand on survey answers when necessary

2.1. Selection

Do you know what employee selection methods are used in your group?
(does your group focus on personality and group/candidate fit?)

How satisfied are you with the methods of employee selection used?

- Very satisfied
- Satisfied
- Neither satisfied nor dissatisfied
- Dissatisfied
- Very dissatisfied
- Don't know

2.2. Training

Approximately how much formal training do you think you have received over the last year?

Was the training off the job or on the job?

What was the training for?

Do you develop your knowledge/skills mostly from the training, colleagues, the job, other, please elaborate?

How satisfied are you with the level of training you receive in your current job?

- ☐ Very satisfied
- ☐ Satisfied
- ☐ Neither satisfied nor dissatisfied
- ☐ Dissatisfied
- ☐ Very dissatisfied
- ☐ Don't know

2.3. Career opportunities

What are your future career objectives? can you fulfill them here?

Overall, how satisfied do you feel with your current career opportunities?

- Very satisfied
- Satisfied
- Neither satisfied nor dissatisfied
- Dissatisfied
- Very dissatisfied
- Don't know

2.4. Performance appraisal

How is your performance appraised?

How satisfied are you with this method of appraising your performance?

- Very satisfied
- Satisfied
- Neither satisfied nor dissatisfied
- Dissatisfied
- Very dissatisfied
- Don't know

2.5. Rewards and Recognition

Do you believe that pay is a sign of status or value for someone in your position?

How do you position your pay in comparison with the external job market?

How satisfied do you feel with your pay?

- ☐ Very satisfied
- ☐ Satisfied
- ☐ Neither satisfied nor dissatisfied
- ☐ Dissatisfied
- ☐ Very dissatisfied
- ☐ Don't know

How satisfied are you with your pay compared with the pay of other people that work here?

- ☐ Very satisfied
- ☐ Satisfied
- ☐ Neither satisfied nor dissatisfied
- ☐ Dissatisfied
- ☐ Very dissatisfied
- ☐ Don't know

Overall, how satisfied do you feel with the rewards and recognition you receive for your performance?

- ☐ Very satisfied
- ☐ Satisfied
- ☐ Neither satisfied nor dissatisfied
- ☐ Dissatisfied
- ☐ Very dissatisfied
- ☐ Don't know

How satisfied do you feel with the benefits you receive other than pay?

- ☐ Very satisfied
- ☐ Satisfied
- ☐ Neither satisfied nor dissatisfied
- ☐ Dissatisfied
- ☐ Very dissatisfied
- ☐ Don't know

2.6. Performance-related-pay

Is your pay related to your individual performance? if yes, how is it related?

How satisfied are you with your 'performance-related pay' system?

- Very satisfied
- Satisfied
- Neither satisfied nor dissatisfied
- Dissatisfied
- Very dissatisfied
- Don't know

2.7. Teamworking

Are you part of a team that work together?

If yes, can you briefly describe your team?

How would you describe the sense of teamworking in your work group? Is it:

- Very strong
- Fairly strong
- Neither strong nor weak
- Fairly weak
- Very weak

2.8. Communication

How would you describe the level of communication inside your team/division?

How would you describe your communication with your superiors?

How would you describe your communication with your subordinates?

How satisfied do you feel with the amount of information you receive about how your company is performing?

- Very satisfied
- Satisfied
- Neither satisfied nor dissatisfied
- Dissatisfied
- Very dissatisfied
- Don't know

I am fully aware of how I contribute to the company achieving its business objectives

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree
- Don't know

Everyone here is well aware of the long-term plans and goals of the organization

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree
- Don't know

2.9. Work-life-balance

How well do you feel that your company does in helping you achieve a balance between home life and work?

- ☐ Very well
- ☐ Quite well
- ☐ Not very well
- ☐ Not at all well

2.10. Job security

Do you feel that your position is valued by the company?

How important is it for you to have a secure job?

I feel my job is secure:

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree
- ☐ Don't know

Section 3: Social relationships at work

(If member of a team) how do you describe your interactions with your teammates? How often do you interact with people outside your team?

(If member of a team) Do you feel people in your team have common goals?
what about your division?

Can you describe the level of trust you have towards your colleagues (teammates
and co-workers in entire division)?

What factors do you believe can help shaping the level of connections and
interactions inside your group?

How do your relationships and interactions with co-workers affect you?

Are there any work procedures or databases that you use in your work? If yes,
can you please elaborate on how these can assist you in your job?

Section 4: Work Attitudes

Now I want to ask some questions related to your feelings towards your work
(inform the informant about the scale)

Note: elaborate on answers when necessary

I am quite proud to be able to tell people who it is I work for

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree
- Don't know

I sometimes feel like leaving this employment for good

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree
- Don't know

I'm not willing to put myself out just to help Company

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree
- Don't know

Even if Company was not doing too well, I would be reluctant to change to another employer

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree
- Don't know

I feel myself to be part of Company

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree
- Don't know

In my work I like to feel I am making some effort, not just for myself but for the Company as well

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree
- ☐ Don't know

The offer of more money with another employer would make me think of changing my job

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree
- ☐ Don't know

I would not recommend a close friend to join our staff

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree
- ☐ Don't know

To know that my own work makes a contribution to the good of Company would please me

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree
- ☐ Don't know

Can you please indicate what are the main factors that can affect your commitment to your company? please elaborate

Overall, I feel I am satisfied with my job

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree
- Don't know

I am generally satisfied with the kind of work I do on this job

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree
- Don't know

Can you please indicate what are the main factors that can affect your job satisfaction? please elaborate

At the end, thank you very much for your time and collaboration, are there any additional comments you'd like to make about this interview or working at Company?

REFERENCES

Adler, P. S. and Kwon, S. W. (2002). 'Social capital: Prospects for a new concept', *Academy of Management Review*, 17(1), pp. 17-40.

Allen, N. J. and Meyer, J. P. (1996). 'Affective, continuance, and normative commitment to the organization: An examination of construct validity', *Journal of Vocational Behavior*, 49(3), pp. 252-276.

Allen, N. J. and Meyer, J. P. (1990). 'The measurement and antecedents of affective, continuance, and normative commitment to the organization', *Journal of Occupational Psychology*, 63(1), pp. 1-18.

Alvesson, M. (2001). 'Knowledge Work: Ambiguity, Image and Identity', *Human Relations*, 54(7), pp. 863-886.

Alvesson, M. (2004). *Knowledge work and Knowledge-intensive firms*, Oxford: Oxford University Press.

Alvesson, M. (1995). *Management of Knowledge-Intensive Companies*, Berlin/New York: de Gruyter.

Alvesson, M. (1993). 'Organization as rhetoric. Knowledge-intensive companies and the struggle with ambiguity', *Journal of Management Studies*, 30(6), pp. 997-1015.

Alvesson, M. (2000). 'Social identity and the problem of loyalty in knowledge-intensive companies', *Journal of Management Studies*, 37(8), pp. 1101-1123.

Alvesson, M. and Willmott, H. (2002). 'Identity regulation as organizational control: Producing the appropriate individual', *Journal of Management Studies*, 39(5), pp. 619-644.

Appelbaum, E., Bailey, T. and Berg, P. (2000). *Manufacturing Advantage: Why High-Performance Systems Pay Off*, Ithaca: ILR Press.

Archer, M. (2003). *Structure, agency and the internal conversation*, Cambridge: Cambridge University Press.

Arthur, J. B. (1994). 'Effects of Human Resource Systems on Manufacturing Performance and Turnover', *Academy of Management Journal*, 37(3), pp. 670-687.

Arthur, M.B. and Rousseau, D.M. (1996). *The boundaryless career: a new employment principle for new organizational era*, in Rousseau, D.M. (Eds), Arthur, M.B., Oxford: Oxford University Press, pp.370-382.

Atkinson, J. (1984), 'Manpower Strategies for Flexible Organisations', *Personnel Management*, August, pp. 24-31.

Bagraim, J. J. (2003). 'The nature and measurement of multiple commitment foci amongst South African knowledge workers', *Management Dynamics: Contemporary Research*, 12(2), pp. 13-23.

Barney, J. (1991). 'Firm Resources and Sustained Competitive Advantage', *Journal of Management*, 17(1), pp. 99-129.

Baron, J.N. and Hannan, M.T. (2002). 'Organisational blueprints for success in high-tech start-ups', *California Management Review*, 44(3), pp. 8-35.

Barrett, B., Chow, S., Cutcher-Gershenfeld, J., Inaba, T., Ishino, I., Moore, M., Ramanand, S., Strolle, M. and Wheaton, A. (2000). 'Creation of social capital in diverse work settings', *International Industrial Relations Association (IIRA)*, World Congress, Tokyo, 29 May-June, pp. 1-10.

Barrick, M.R. and Mount, M. K. (1991). 'The Big Five personality dimensions and job performance: A meta-analysis', *Personnel Psychology*, 44, pp. 1-26.

Bateman, T. and Organ, D. (1983). 'Job Satisfaction and the Good Soldier: The Relationship between Affect and Employee 'Citizenship'', *Academy of Management Journal*, 26, pp. 586-595.

Bateson, G. (1973). *Steps to an Ecology of Mind*, London: Paladin.

Baugh, S.G. and Roberts, R.M. (1994). 'Professional and organizational commitment among engineers: conflicting or complimentary?', *IEEE Transactions on Engineering Management*, 41(2), pp. 108-114.

Beaumont, P. B. and Hunter, L. C. (2002). *Managing knowledge workers: The human resource dimension*, London: Short Run Press.

Bechhofer, F. (1974), 'Current approaches to empirical research: some central idea', in J. Rex (ed.), *Approaches to sociology*, London: Routledge.

Becker, B. E. and Gerhart, B. (1996). 'Human resources and organizational performance: Progress and prospects', *Academy of Management Journal (Special Issue: Human Resources and Organizational Performance)*, 39(4), pp. 779-801.

Becker, B. E. and Huselid, M. A. (1998). 'High performance work systems and firm performance: A synthesis of research and managerial implications', *Research in Personnel and Human Resource Management*, 16(1), pp. 53-101.

Becker, B.E. and Huselid M.A. (2006). 'Strategic Human Resources Management: Where Do We Go From Here?', *Journal of Management*, 32(6), pp. 898-925

Becker, G. (1964). *Human Capital*, New York: Columbia University Press.

Beer, M., Spector, B., Lawrence, P., Quinn Mills, D. and Walton, R. (1984). *Managing human assets*. New York: Free Press.

Berg, B. (1989). *Qualitative research methods for the social sciences*, Boston: Allyn and Bacon.

Bigley, G. and Pearce, J. (1998). 'Straining for shared meaning in organizational science: Problems of trust and distrust', *Academy of Management Review*, 23(3), pp. 405-421.

Boh, W. F. (2007). 'Mechanisms for sharing knowledge in project-based organizations', *Information and Organization*, 17, pp. 27-58.

Bontis, N. (1998). 'Intellectual capital: an exploratory study that develops measures and models', *Management Decision*, 36(2), pp. 63-76.

Boselie, P. , Dietz, G. and Boon, C. (2005). 'Commonalities and contradictions in HRM and performance research', *Human Resource Management Journal*, 15(3), pp. 67-94.

Bouty, I. (2000). 'Interpersonal and interaction influences on informal resource exchanges between R&D researchers across organisational boundaries', *Academy of Management Journal*, 43(1), pp. 50-65.

Bowen, D. E. and Ostroff, C. (2004). 'Understanding HRM-Firm Performance Linkages: The role of the "Strength" of the HRM system', *Academy of Management Review*, 29(2), pp. 203-221.

Bowman, C. and Ambrosini, V. (2000). 'Value Creation Versus Value Capture: Towards a Coherent Definition of Value in Strategy', *British Journal of Management* , 11(1), pp. 1-15.

Bowman, C. and Swart, J. (2007). 'Whose human capital? The challenge of value Capital when challenge is embedded', *Journal of Management Studies*, 44 (4), pp. 488-505.

Boxall, P. and Purcell, J. (2003). *Strategy and Human Resource Management*, Basingstoke: Palgrave MacMillan.

Boxall, P. and Steeneveld, M. (1999). 'Human resource strategy and competitive advantage: a longitudinal study of engineering consultancies', *Journal of Management Studies*, 36(4), pp. 443-63.

Bridges, S. and Harrison, J.K. (2003), 'Employee Perceptions of Stakeholder Focus and Commitment to the Organization', *Journal of Managerial Issues*, 15(4), pp. 498-505.

Brief, A. P. (1998). *Attitudes in and around organizations*, Thousand Oaks, CA: Sage.

Brooke, P. P. and Price, J. L. (1989). 'The determinants of employee absenteeism: An empirical test of a causal model', *Journal of Occupational Psychology*, 62(1), pp. 1-19.

Brooke, P. P., Russell, D. and Price, J. L. (1988). 'Discriminant validation of measures of job satisfaction, job involvement, and organizational commitment', *Journal of Applied Psychology*, 73(2), pp. 139-145.

Brown, J. S. and Duguid, P. (2001). 'Knowledge and organization: A social-practice perspective', *Organization Science*, 12, pp. 198-213.

Brown, J. S. and Duguid, P. (1991). 'Organizational learning and communities of practice: Toward a unified view of working, learning and innovation', *Organization Science*, 2(1), pp. 40-57.

Brown, A.D. and Humphreys, M. (2006). 'Organizational identity and place: a discursive exploration of hegemony and resistance', *Journal of Management Studies*, 43 (2), pp. 231-257.

Bryman, A. (1988). *Quantity and quality in social research*, London: Unwin Hyman.

Bryman, A. (2004). *Social research methods*, 2nd ed., Oxford: Oxford University Press.

Bryman, A. and Burgess, R. (1993). *Analyzing qualitative data*, London: Routledge.

Buitendach, J. H. and De Witte, H. (2005). 'Job insecurity, extrinsic and intrinsic job satisfaction and affective organisational commitment of maintenance workers in a parastatal', *South African Journal of Business Management*, 36(2), pp. 27-37.

Bullock, R., Little, M. and Millham, S. (1992). 'The relationship between quantitative and qualitative approaches in social policy research', in: J. Brannen, ed. *Mixing methods: Qualitative and quantitative research*, Hants: Ashgate, pp. 81-112.

Burgess, R. G. (1984). *In the Field: An Introduction to Field Research*, London: Allen and Unwin.

Burt, R. S. (1992). *Structural hole*, Cambridge, MA: Harvard University Press.

Burt, R. S. (1997). 'The contingent value of social capital', *Administrative Science Quarterly*, 42(2), pp. 339-365.

Cacioppo, J. T., Gun, R. S. and Gary, G. B. (2004). 'Realism, Instrumentalism, and Scientific Symbiosis: Psychological Theory as a Search for Truth and the Discovery of Solutions', *American Psychologist*, 59(4), pp. 214-223.

Cappelli, P. (1999). *The New Deal at Work*, Boston: Harvard Business School Press.

Cascio, W. F. (1998). *Managing human resources: Productivity, Quality of Work Life, Profits*, 5th Ed, USA: McGraw Hill.

Chang, E. (1999). 'Career commitment as a complex moderator of organizational commitment and turnover intention', *Human Relations*, 52, pp. 1257–78.

Chang, E. (2005). 'Employees' overall perception of HRM effectiveness', *Human Relations*, 58(4), pp. 523-544.

Cicourel, A. V. (1973). *Cognitive sociology*, Harmondsworth, UK: Penguin Books.

Clark, A.E. (1996). 'Job Satisfaction in Britain', *British Journal of Industrial Relations*, 34(2), pp. 189-218.

Clark, M.M. (2003). 'Academics Tout "Social Capital" as Latest Thing in Strategic HR', *HR Magazine*, 48(2), pp. 38.

Clinebell S. and Shadwick, G. (2005). 'The Importance of Organizational Context on Employees' Attitudes: An Examination of Working in Main Offices Versus Branch Offices', *Journal of Leadership & Organizational Studies*, 11 (2), pp. 89-100.

Cohen, A. (1991). 'Career stage as a moderator of the relationships between organizational commitment and its outcomes: a meta-analysis', *Journal of Occupational Psychology*, 64, pp. 253–268.

Cohen, J. and Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences*, Hillsdale, NJ: Erlbaum.

Coleman, J. (1990). *Foundations of social theory*, Cambridge, MA: Harvard University Press.

Conway, J. M. (1999). 'Distinguishing contextual performance from task performance for managerial jobs', *Journal of Applied Psychology*, 84(1), pp. 3-13.

Conway, E. and Monks, K. (2008). 'HR practices and commitment to change: an employee-level analysis', *Human Resource Management Journal*, 18(1), pp.72-89.

Corsun, D. L. and Enz, C. A. (1999). 'Predicting psychological empowerment among service workers: The effect of support-based relationships', *Human Relations*, 52(2), pp. 205 -224.

Coster, E. A. (1992). 'The perceived quality of working life and job satisfaction', *Journal of Industrial Psychology*, 18(2), pp. 6-9.

Cote, S. (1999). 'Affect and performance in organizational settings', *Current Directions in Psychological Science*, 8, pp. 65-68.

Cowan, R., David, P. and Foray, D. (2000). 'The explicit economics of knowledge codification and tacitness', *Industrial and Corporate Change*, 9(2), pp. 211–253.

Coyle-Shapiro, J., Kessler, I. and Purcell, J. (2004). 'Exploring Organizationally Directed Citizenship Behavior: Reciprocity or 'It's my Job'? ', *Journal of Management Studies*, 41(1), pp. 85-106.

Cranny, C. J., Smith, P. C. and Stone, E. F. (1992). *Job Satisfaction: How people feel about their jobs and how it affects their performance*, New York: Lexington.

Creswell, J. W. (2003). *Research design. Qualitative, quantitative and mixed method Approach*, Thousand Oaks, CA: Sage.

Davenport, T. (1999). *Human Capital*, San Francisco: Jossey-Bass.

Davenport, T. H. and Prusak, L. (1998). *Working knowledge: How organizations manage what they know*, Boston: Harvard Business School Press.

DeCotiis, T.A. and Summers, T.P. (1987). 'A path analysis of a model of the antecedents and consequences of organizational commitment', *Human Relations*, 40, pp. 445–470.

Deetz, S. (1995). *Transforming Communication, Transforming Business: Building Responsive and Responsible Workplaces*, Cresskill: Hampton Press.

Delaney, J. and Huselid, M. (1996). 'The impact of human resource management practices on perceptions of organizational performance', *Academy of Management Journal*, 39(4), pp. 949-969.

Delery, J. E. and Doty, D. H. (1996). 'Modes of theorizing in strategic human resource management: Tests of universalistic, contingency, and configurational performance predictions', *Academy of Management Journal*, 39(4), pp. 802-835.

Department of Trade and Industry, Economic and Social Research Council, Advisory, Conciliation and Arbitration Service, and the Policy Studies Institute. (1998). *Workplace Employment Relations Survey (WERS)*.

Department of Trade and Industry, Economic and Social Research Council, Advisory, Conciliation and Arbitration Service, and the Policy Studies Institute. (2004). *Workplace Employment Relations Survey (WERS)*.

Drucker, P. (1989). *The New Realities (1st Edition)*, Oxford: Heinemann.

Dubin, R. (1982). 'Management: Meanings, methods, and moxie', *Academy of Management Review*, 7(3), pp. 372-379.

Dutton, J. E. and Dukerich, J. M. (1991). 'Keeping an eye on the mirror: image and identity in organizational adaptation', *Academy of Management Review*, 16(3), pp. 517-54.

Dyer, H. D. and Nobeoka, K. (2000). 'Creating and Managing a High-Performance Knowledge-Sharing Network: The Toyota Case', *Strategic Management Journal*, 21(3), pp. 345-367.

Dyer, W. G. and Wilkins, A. L. (1991). 'Better stories, not better constructs, to generate better theory: A rejoinder to Eisenhardt', *The Academy of Management Review*, 16(3), pp. 613-619.

Early, C. (1989). 'Social loafing and collectivism: A comparison of the United States and the People's Republic of China', *Administrative Science Quarterly*, 34, pp. 565-581.

Easton, G.(2000). 'Case research as a method for industrial networks: a realist apologia', in: S. Ackroyd and S. Fleetwood, eds., *Realist perspectives On management and organisations*, New York: Routledge, pp. 205-219.

Eisenberger, R., Fasolo, P. and Davis-LaMastro, V. (1990). 'Perceived organizational support and employee diligence, commitment, and innovation', *Journal of applied psychology*, 75(1),pp. 51-60.

Eisenhardt, K. M. (1989). 'Building theories from case study research', *Academy of Management Review*, 14(4), pp. 532-550.

Fletcher, C. and Williams, R. (1996). 'Performance management, job satisfaction and organizational commitment', *British journal of management*, 7(2), pp. 169-179.

Floyd, S. W. and Lane, P. J. (2000). 'Strategizing throughout the organization: management role conflict in strategic renewal', *Academy of Management Review*, 25(1), pp. 154-77.

Fombrun, C., Tichy, M. and Devanna, M. A. (1984). *Strategic Human Resource Management*, New York: John Wiley & Sons.

Frenkel, S., Korczynski, M., Donohue, L. and Shire, K. (1995). 'Re-Constituting Work: Trends Towards Knowledge Work and Info-Normative Control', *Work, Employment and Society* 9(4), pp. 773-96.

Frenkel, S., Korczynski, M., Shire, K. and Tam, M. (1999). *On the Front Line: Organization of Work in the Information Economy*, London: Cornell University Press.

Gargiulo, M. and Benassi, M. (2000). 'Trapped in your own net? Network cohesion, structural holes, and the adaptation of social capital', *Organization Science*, 11(2), pp. 183-196.

Gartner, K. and Nollen, S. (1989). 'Career experiences, perceptions of employment practices and psychological commitment to the organization', *Human Relations*, 42(11), pp. 975 – 991.

Gaugler, B.B., Rosenthal, D.B., Thornton, G.C., III, and Bentson, C. (1987). 'Meta-analysis of assessment center validity', *Journal of Applied Psychology*, 72, pp. 493-511.

Gerhart, B. (2005). 'Human resources and business performance: Findings, unanswered questions, and an alternative approach', *Management Review*, 16(2), pp. 174-185.

Gerhart, B. (2004). 'Human Resource Systems', in Ostroff, C. and Judge, T. (eds), *Perspectives on Organizational Fit*, San Francisco: Jossey-Bass.

Gertler, M. S. (2003). 'Tacit knowledge and the economic geography of context', *Journal of Economic Geography*, 3, pp. 75-99.

Ghauri, P. and Gronhaug, K. (2002). *Research Methods in Business Studies: A Practical Guide*, second edition, Harlow, Essex: Financial Times Prentice Hall.

Gibbons, M., Limoges, C., Nowortny H., Shartzman S., Scott P. and Trow M. (1994). *The New Production of Knowledge*. London: Sage.

Gimeno, J., Folta, T.B., Cooper, A.C. and Woo, C.Y. (1997). 'Survival of the fittest? Entrepreneurial human capital and the persistence of underperforming firms', *Administrative Science Quarterly*, 42(6), pp. 750-783.

Godard, J. (2004). 'A critical assessment of the high-performance paradigm', *British Journal of Management*, 42(2), pp. 349-378.

Godard, J. (2001). 'Beyond the High Performance Paradigm? An Analysis of variations in Canadian Managerial Perceptions of Reform Program Effectiveness', *British Journal of Industrial Relations*, 39(1), pp. 25-52.

Gould-Williams, J. (2004). 'The Effects of 'High Commitment' HRM Practices on Employee Attitude: The Views of Public Sector Workers', *Public Administration*, 82 (1), pp. 63-81.

Gould-Williams, J. (2003). 'The importance of HR practices and workplace trust in achieving superior performance: a study of public-sector organizations', *International Journal of Human Resource Management*, 14(1), pp. 28-54.

Grant, D. and Shields, J. (2002). 'Employee Reactions to Human Resource Management: Debates and Perspective', *Journal of Industrial Relations*, 44(3), pp. 309-313.

Grant, R. (1996). 'Towards a knowledge-based theory of the firm', *Strategic Management Journal*, 17(winter special issue), pp. 109-122.

Gratton, L., Hope-Hailey, V., Stiles, P. and Truss, C. (1999). 'Linking individual performance to business strategy: the people process model', *Human Resource Management*, 38(1), pp. 17-31.

Guest, D. (1999). 'Human resource management the workers verdict', *Human Resource Management Journal*, 9(3), pp. 5-25.

Guest, D., Conway, N. and Dewe, P. (2004). 'Using Sequential Tree Analysis to Search for "Bundles" of HR Practices', *Human Resource Management Journal*, 14(1), pp. 79-96.

Guest, D. and Hoque, K. (1994). 'The good, the bad and the ugly: employment relations in new non-union workplaces', *Human Resource Management Journal*, 5(1), pp. 1-14.

Guest, D., Michie, J. Conway, N. and Sheehan, M. (2003). 'Human resource management and corporate performance in the UK', *British Journal of Industrial Relations*, 41(2), 291-314.

Guthrie, J.P. (2001). 'High-Involvement Work Practices, Turnover, and Productivity: Evidence from New Zealand', *Academy of Management Journal*, 44(1), pp. 180-91.

Hackman, J. R. and Oldham's, G. R. (1975). 'Development of job diagnostic survey', *Journal of Applied psychology*, 35(2), pp. 340-381.

Hakim, C. (1987). *Research Design: Strategies and choices in the design of social research*, London: Routledge.

Hall, R. (1992). 'The strategic analysis of intangible resources', *Strategic Management Journal*, 13(2), pp.135- 144.

Hansen, M. T., Nohria, N. and Tierney, T. (1999). 'What's your strategy for managing knowledge?', *Harvard Business Review*, 77(2), pp. 106-116.

Hargadon, A. and Fanelli, A. (2002). 'Action and possibility: Reconciling dual perspectives of knowledge in organizations', *Organization Science*, 13(3), pp. 290-302.

Hatch, M.J. and Schultz, M.S. (2002). 'The dynamics of organizational identity', *Human Relations*, 55(8), pp. 989-1018.

Hesketh, A. and Fleetwood, S. (2006). 'Beyond measuring the human resources management-organizational performance link: Applying critical realist meta-theory', *Organization*, 13(5), pp. 677-699.

Heskett, J.L., Sasser, W.E., Jr and Schlesinger, L.A. (1997). *The service Profit Chain. How Leading Companies Link Profit and Growth to Loyalty, Satisfaction, and Value*, New York: The Free Press.

Hirschfeld, R. R. (2000). 'Validity studies. Does revising the intrinsic and extrinsic subscales of the Minnesota Satisfaction Questionnaire Short Form make a difference?', *Educational Psychological Measurement*, 60(2), pp. 255-270.

Hislop, D. (2008). 'Concepts: The Case of Some Consultants and Service Engineers Conceptualizing Knowledge Work Utilizing Skill and Knowledge-based', *Management Learning*, 39(5), pp. 579-596.

Hoque, K. (1999). 'Human resource management and performance in the UK hotel industry', *British Journal of Industrial Relations*, 37(3), pp. 419-443.

Horwitz, F.M., Heng, C.H., and Quazi, H.A. (2003). 'Finders, Keepers? Attracting, motivating and retaining knowledge workers', *Human Resource Management Journal*, 13(4), pp. 23-44.

Hunter, L., Beaumont, P. and Lee, M. (2002). 'Knowledge Management Practice in Scottish Law Firms', *Human Resource Management Journal* 12(2), pp. 4-21.

Huselid, M. (1995). 'The impact of human resource management practices on turnover, productivity, and corporate financial performance', *Academy of Management Journal*, 38(3), pp. 635-672.

Hutchison. S. and Garstka. M. L. (1996). 'Sources of perceived organizational support: goal setting and feedback', *Journal of Applied Social Psychology*, 26, pp. 1351-1366.

Iaffaldano, M.T. and Muchinsky, P.M. (1985). 'Job satisfaction and job performance: A meta-analysis', *Psychological Bulletin*, 97, pp. 251-273.

Ichniowski, C., Shaw, K. and Prensush, G. (1997). 'The effect of human resource management practices on productivity: A study of steel finishing lines', *American Economic Review*, 87(3), pp. 291-313.

Johnson-Laird, P. N. (1983). *Mental Models*, Cambridge: Cambridge University Press.

Judge, TA, Thoresen, C. J., Bono, J. E. and Patton, G. K. (2001). 'The job satisfaction-job performance relationship: A qualitative and quantitative review', *Psychological Bulletin*, 127(3), pp. 376-407.

Kalleberg, A. L. and Moody, J.W. (1994). 'Human resource management and organizational performance', *American Behavioral Scientist*, 37(7), pp. 948-962.

Kang, S. C., Morris, S.S. and Snell, S.A. (2007). 'Relational Archetypes, Organizational Learning, and Value Creation: Extending the Human Resource Architecture', *Academy of Management Review*, 32(1), pp. 236-256.

Kang, S.C. and Snell, S.A. (2009). 'Intellectual Capital Architectures and Ambidextrous Learning: A Framework for Human Resource Management', *Journal of Management Studies*, 46 (1), pp. 65-92.

Kanter, R. M. (1977). *Men and women of the corporation*, New York: Basic Books.

Katila, R. (2002). 'New product search over time: Past ideas in their prime?', *Academy of Management Journal*, 45, pp. 995–1010.

Katila, R. and Ahuja, G. (2002). 'Something old, something new: A longitudinal study of search behavior and new product introduction', *Academy of Management Journal*, 45, pp. 1183–1194.

Keenan, J. and Aggestam, M. (2001). 'Corporate governance and intellectual capital: some conceptualisations', *Corporate Governance*, 9(4), pp. 259-275.

Kinnear, L. and Sutherland, M. (2000). 'Determinants of organisational commitment amongst knowledge workers', *South African Journal of Business Management*, 32(2), pp. 106-111.

Kinnie, N., Hutchinson, S., Purcell, J., Rayton, B., and Swart, J. (2005). 'Satisfaction with HR practices and commitment to the organization: why one size does not fit all', *Human Resource Management Journal*, 15(4), pp. 9-29.

Kinnie, N., Swart, J., Rayton, B., Hutchinson, S. and Purcell, J. (2004). 'HR Policy and Performance: an occupational analysis', Lisbon: *2004 Meeting of the HRM Study Group of the IIRA, 7th IIRA European Regional Congress*.

Koch, M.J. and McGrath, R.G. (1996). 'Improving labour productivity: Human resource management policies do matter', *Strategic Management Journal*, 17, pp. 335-354.

Kostova, T. and Roth, K. (2003). 'Social capital in multinational corporations and a micro-macro model of its formation', *Academy of Management Review*, 28, pp. 297–317.

Krackhardt, D. and Hanson, J.R. (1993). 'Informal networks: The company behind the charts', *Harvard Business Review*, 71(4) , pp. 104-112.

Lam (2005). 'Organizational Learning in Multinationals: R&D Networks of Japanese and US MNEs in the UK', *Journal of Management Studies* 40(3):673-703.

Lance, C. (1991). 'Evaluation of a Structural Model Relating Job Satisfaction, Organizational Commitment, and Precursors to Voluntary Turnover', *Multivariate Behavioral Research*, 26(1), pp. 137-162.

Latham, G.P. and Wexley, K.N. (1981). *Increasing productivity through performance appraisal*, Reading, Mass: Addison-Wesley.

Laursen, K. and Mahnke, V. (2001). 'Knowledge Strategies, Firm Types, and Complementarity in Human-Resource Practices', *Journal of Management and Governance*, 5, pp. 1–27.

Leana, C. R. and Rousseau, D. M. (2000). *Relational Wealth: Advantages of Stability in a Changing Economy*, New York: Oxford.

Leana, C. R. and Van Buren, H. J. (1999). 'Organizational Social Capital and Employment Practices', *Academy of Management Review* 24(3), pp. 538-555.

Leong, S.M., Randall, D.M. and Cote, J.A. (1994). 'Exploring the organizational commitment– performance linkage in marketing', *Journal of Business Research*, 29(1), pp. 57–64.

Lepak, D. P. and Snell, S. A. (2007). 'Employment subsystems and the 'HR Architecture', in: *Oxford Handbook of Human Resource Management*, Boxall, Peter (Editor); Purcell, John (Editor); Wright, Patrick (Editor), Oxford ; New York: Oxford University Press, pp. 210-230.

Lepak, D. P. and Snell, S. A. (2002). 'Examining the human resource architecture: The relationship among human capital, employment, and human resource configurations', *Journal of Management*, 28(4), pp. 517–543.

Lepak, D. P. and Snell, S. A. (1999). 'The human resource architecture: Toward a theory of human capital allocation and development', *Academy of Management Review*, 24(1), pp. 31-48.

Li-Ping Tang, T. and Talpade, M. (1999). 'Sex differences in satisfaction with pay and co-workers', *Public Personnel Management*, 28(3), pp. 345-348.

Locke E. A. (1976). 'The nature and causes of job satisfaction', in Dunnette M.D. (eds), *Handbook of industrial and organizational psychology*, Chicago: Rand McNally, pp. 1297-1343.

Lyles, M. A. and Mitroff, I. I. (1980). 'Organization problem formulation: An empirical study', *Administrative Science Quarterly*, 25, pp. 102–119.

MacDuffie, J. (1995). 'Human resource bundles and manufacturing performance: Organizational logic and flexible production systems in the world auto industry', *Industrial and Labor Relations Review*, 48(2), pp. 197-221.

Macky, K. and Boxall, P. (2007). 'The relationship between 'high-performance work practices' and employee attitudes: an investigation of additive and interaction effects', *The international Journal of Human Resource Management*, 18(4), pp. 537-567.

Maister, D. (1982). 'Balancing the professional service firm', *Shan Management Review*, Fall, pp. 15-29.

March, J. G. (1991). 'Exploration and Exploitation in Organizational Learning', *Organization Science* 2(1), pp. 71–87.

Martin, J., Knopoff, K. and Beckman, C. (1998). 'An alternative to bureaucratic impersonality and emotional labor: bounded emotionality at The Body Shop', *Administrative Science Quarterly*, 43(2), pp. 429-469.

Martin, X. and Mitchell, W. (1998). 'The influence of local search and performance heuristics on new design introduction in new product market', *Research Policy*, 26, pp. 753–771.

Mathieu, J.E. and Zajac, D.M. (1990). 'A Review and Meta-Analysis of the Antecedents, Correlates and Consequences of Organizational Commitment', *Psychological Bulletin*, 108(2), 171-194.

Maxwell, J. A. (1998). 'Designing a qualitative study', in Bickman, L. and Rog, D. J., *Handbook of applied social research methods*, London: Sage.

May, T.Y., Korczynski, M. and Frenkel, S.J. (2002). 'Organizational and occupational commitment: knowledge worker in large corporations', *Journal of Management Studies*, 39(6), pp. 775-801.

Mayer, R.C. and Schoorman, F. D. (1992). 'Predicting participation and production outcomes through a two-dimensional model of organizational commitment', *Academy of Management Journal*, 35(3), pp. 671-684.

McElroy, J.C. (2001). 'Managing workplace commitment by putting people first', *Human Resource Management Review*, 11(3), pp. 327-336.

McKnight, D., Cummings, L. and Chervany, N. (1998). 'Initial trust formation in new organizational relationships', *Academy of Management Review*, 23(3), pp. 473-490.

Meyer, J. P. and Allen, N. J. (1997). *Commitment in the workplace: Theory, research, and application*, Thousand Oaks: Sage.

Meyer, J. and Smith, C.A. (2000). 'HRM practices and organizational commitment: test of a mediation model', *Canadian Journal of Administrative Sciences*, 17 (4), pp.319-331.

Meyer, J. P., Stanley, D. J., Herscovitch, L. and Topolnytsky, L. (2002). 'Affective, continuance, and normative commitment of the organisation: a meta-analysis of antecedents, correlates and consequences', *Journal of Vocational Behavior*, 61(1), pp. 20- 52.

Michie, S. and West, M.A. (2004). 'Managing people and performance: an evidence based framework applied to health service organisations', *International Journal of Management Reviews*, 5/6 (2), pp. 91–111.

Miles, M. B. and Huberman, A. M. (1994). *Qualitative data analysis. An expanded Sourcebook*, London: Sage.

Morris, T. (2001). 'Asserting Property Rights: Knowledge Codification in the Professional Service Firm', *Human Relations* 54(7), pp. 819-838.

Morris, T. (2000). 'Promotion policies and knowledge bases in professional service firms', in M. Peiperl, M. Arthur, R. Goffee and T. Morris (eds). *Career Frontiers: New Conceptions of Working Lives*, Oxford: OUP.

Morris, T. and Empson, L. (1998). 'Organization and Expertise: An exploration of Knowledge Bases and the Management of Accounting and Consulting Firms', *Organizations and Society* 23(5/6), pp. 609–624.

Mowday, R. T., Porter, L. W. and Steers, R. M. (1982). *Employee-organization linkages: The psychology of commitment, absenteeism, and turnover*, San Diego: Academic Press.

Mowday, R. T., Steers, R. M. and Porter, L. W. (1979). 'The measurement of organizational commitment', *Journal of Vocational Behavior*, 14(2), pp. 224-247.

Mueller, C. W. and Price, J. L. (1990). 'Economic, psychological, and sociological determinants of voluntary turnover', *Journal of Behavioral Economics*, 19(3), pp. 321-335.

Nahapiet, J. and Ghoshal, S. (1998). 'Social Capital, Intellectual Capital, and the Organizational Advantage', *Academy of Management Review* 23(2), pp. 242–66.

Nelson, R. and Winter, S. (1982). *An evolutionary theory of economic change*. Cambridge, MA: Belknap Press.

Neuman, W. (1997). *Social research method: qualitative and quantitative approaches*, Allyn and Bacon, USA

Newell, H. and Dopson, S. (1996). 'Muddle in the middle: organizational restructuring and middle management careers', *Personnel Review*, 25(4), pp.4-20.

Nonaka, I. (1994). 'A dynamic theory of organizational knowledge creation', *Organization Science*, 5(1), pp. 14-37.

Nonaka, I., Toyama, R. and Nagata, A. (2000). 'A firm as a knowledge-creating entity: A new perspective on the theory of the firm', *Industrial and Corporate Change*, 9(1), pp. 1-20.

Novick, G. (2008). 'Is there a Bias Against Telephone Interviews in Qualitative Research?', *Research in nursing & Health*, 31(4): 391-398.

Ogbonna, E. and Wilkinson, B. (2003). 'The false promise of organisational culture change: A case study of middle managers in grocery retailing', *Journal of Management Studies*, 40(5), pp. 1151-1178.

Ogilvie, J.R. (1986). 'The role of human resource management practices in predicting organizational commitment', *Group and Organization Studies*, 19, pp. 335-359.

O'Reilly, C. and Chatman, J. (1986). 'Organizational commitment and psychological attachment: the effects of compliance, identification, internalization of prosocial behaviors', *Journal of Applied Psychology*, 71(3),pp. 492-499.

Ostroff, C. (1992). 'The relationship between satisfaction, attitudes and performance: an organizational level analysis', *Journal of Applied Psychology*, 77(6), pp. 963-974.

Ostroff, C. and Bowen, D. (2000). 'Moving HR to a higher level: HR practices and organizational effectiveness', in K. Klein and S. Kozlowski (eds), *Multilevel Theory, Research and Methods in Organizations: Foundations, Extensions and New Directions*, San Francisco: Jossey-Bass.

Ouchi, W. (1980). 'Markets, bureaucracies, and clans', *Administrative Science Quarterly*, 25, pp. 129-141.

Paul, A. and Anantharaman, R. (2003). 'Impact of people management on organizational performance: analysis of a causal model', *International Journal of Human Resource Management*, 14(7), pp. 1246-1266.

Podsakoff, P. M., Niehoff, B. P. and MacKenzie, S. B. (1993). 'Do Substitutes for Leadership Really Substitute for Leadership? An Empirical Examination', *Organizational Behavior & Human Decision Processes*, 54 (1), pp. 1-45.

Polanyi, M. (1966). *The Tacit Dimension*, London: Routledge & Kegan Paul.

Porter, L. W., Steers, R. M., Mowday, R. T. and Boulian, P. V. (1974). 'Organizational commitment, job satisfaction and turnover among psychiatric technicians', *Journal of Applied Psychology*, 59(5), pp. 603-609.

Potter, G. (2000). *The philosophy of social sciences*, London: Prentice Hall.

Preece, J. (2003). 'Tacit knowledge and social capital: Supporting sociability in online Communities of Practice', *Proceedings of I-KNOW'03, 3rd International Conference on Knowledge Management*. Graz, Austria, July 2-4. In K. Tochtermann and H. Maurer, pp. 72-78.

Prencipe, A. and Tell, F. (2001). 'Inter-project learning: processes and outcomes of knowledge codification in project-based firms', *Research Policy*, 30(9), pp. 1373-1394.

Price, J. and Mueller, C. (1981). *Professional Turnover: The Case of Nurses*, New York: Medical and Scientific Books.

Purcell, J. (1999). 'Best Practice and Best Fit: Chimera or Cul-de-sac?', *Human Resource Management Journal*, 9(3), pp. 26-41.

Purcell, J., Kinnie, N., Hutchinson, S., Rayton, B. and Swart, J. (2003). *Understanding the People and Performance Link: Unlocking the black box*, London: Chartered Institute of Personnel and Development.

Purcell, J., Kinnie, N., Swart, J., Rayton, B. and Hutchinson, S. (2009). *People Management and Performance*, London: Routledge.

Putnam, R. (1993). 'The prosperous community: Social capital and public life', *The American Prospect*, 13, pp. 35-42.

Randall, D. M. and O'Driscoll, M. P. (1997). 'Affective Versus Calculative Commitment: Human Resource Implications', *The Journal of Social Psychology*, 137(5), pp. 606-617.

Reagans, R. and Zuckerman, E. W. (2001). 'Networks, diversity, and productivity: The social capital of corporate R&D teams', *Organization Science*, 12(4), pp. 502-517.

Reed, M. I. (1996). 'Expert power and control in late modernity: an empirical review and theoretical synthesis', *Organization Studies*, 17(4), pp. 573-97.

Reich, R. (1991). *The Wealth of Nations*, London: Simon and Schuster.

Ring, P. (1998). 'Fragile and resilient trust and their roles in economic exchange', *Business & Society*, 35, pp. 148-175.

Ring, P. and Van de Ven, A. (1992). 'Structuring cooperative relationships between organizations', *Strategic Management Journal*, 13(7), pp. 483-498.

Roberts, H. F. and Roseanne, F. J. (1998). 'Evaluating the interaction between self-leadership and work structure in predicting job satisfaction', *Journal of Business Psychology*, 12(3), pp. 257-267.

Robertson, M. and O'Malley Hammersley, G. (2000). 'Knowledge management practices within a knowledge-intensive firm: the significance of the people management dimension', *Journal of European Industrial Training*, 24 (2/3/4), pp. 241-253.

Robertson, M. and Swan, J. (2003). 'Control – What Control?: Culture and Ambiguity Within a Knowledge Intensive Firm', *Journal of Management Studies* 40(4), pp. 831-858.

- Rogg, K.L., Schmidt, D.B., Shull, C. and Schmitt, N. (2001). 'Human Resource Practices, Organisational Climate, and Customer Satisfaction', *Journal of Management*, 27(4), pp. 431-449.
- Rousseau, D.M. (1978). 'Characteristics of Departments, Positions, and Individuals: Contexts for Attitudes and Behavior', *Administrative Science Quarterly*, 23, pp. 521-540.
- Rousseau, D. M. (1995). *Psychological contracts in organisations*, Thousand Oaks: Sage.
- Rousseau, D. M., Sitkin, S. B., Burt, R. S. and Camerer, C. (1998). 'Not so different after all: a cross-discipline view of trust', *Academy of Management Review*, 23, pp. 393 – 404.
- Sarantakos, S. (1998). *Social Research*, 2nd ed., Hampshire: Palgrave Macmillan.
- Saviotti, P. P. (1998). 'On the dynamics of appropriability, of tacit and of codified knowledge', *Research Policy*, 26(7-8), pp. 843–856.
- Sayer, A. (1992). *Method in social science: A realist approach*, 2nd ed., London: Routledge.
- Scheepers, R., Venkitachalam, K. and Gibbs, M. R. (2004). 'Knowledge strategy in organizations: refining the model of Hansen, Nohria and Tierney', *Journal of Strategic Information Systems*, 13(3), pp. 201–222.
- Schultz, T. W. (1961). 'Investment in human capital', *American Economic Review*, 51, pp. 1-17.
- Sempene, M. E., Rieger, H. S. and Roodt, G. (2002). 'Job satisfaction in relation to organisational culture', *Journal of Industrial Psychology*, 28(2), pp. 23-30.

Shore, L. M. and Wayne, S. J. (1993). 'Commitment and employee behavior comparison of affective commitment and continuance commitment with perceived organizational support', *Journal of Applied Psychology*, 78, pp. 774-780.

Silverman, D. (1993). *Interpreting qualitative data: Methods for analysing talk, text and Interaction*, London: Sage.

Snell, S. A. and Dean, J. W. (1992). 'Integrated manufacturing and human resource management: A human capital perspective', *Academy of Management Journal*, 35(3), pp. 467- 504.

Snell, S. A., and Youndt, M.A. (1995). 'Human resource management and firm performance: Testing a contingency model of executive controls', *Journal of Management*, 21 (4), pp. 711-737.

Spector, P. E. (1997). *Job satisfaction: Application, assessment, causes, and consequences*, Thousand Oaks, CA: Sage.

Spender, J. C. (1996). 'Making knowledge the basis of a dynamic theory of the firm', *Strategic Management Journal*, 17(Winter Special Issue), pp. 45-62.

Starbuck, W. (1992). 'Learning by knowledge-intensive firms', *Journal of Management Studies*, 29(6),pp. 713-740.

Steers, R. (1977). 'Antecedents and outcomes of organizational effectiveness', *Administrative Science Quarterly*, 22, pp. 40-56.

Stewart, T.A. (1997). *Intellectual Capital: The New Wealth of Organizations*, New York: Doubleday.

Sturges, J. and Hanrahan, K. (2004). 'Comparing Telephone and Face-to-Face Qualitative Interviewing: A Research Note', *Qualitative Research*, 4 (1), pp. 107-118.

Subramaniam, M. and Youndt, M. A. (2005). 'The Influence of Intellectual Capital on the Types of Innovative Capabilities', *Academy of Management Journal*, 48(3), pp. 450-463.

Super, D.E. (1980). 'A life span, life-space approach to career development', *Journal of Vocational Behaviour*, 16(3), pp. 282-298.

Swailles, S. (2002). 'Organizational commitment: a critique of the construct and measures', *International Journal of Management Reviews*, 4 (2), pp. 155-178.

Swan, J., Robertson, M. and Newell, S. (1999). 'Knowledge management: when will people enter the debate?', paper presented at *the Information Systems Research Seminar in Scandinavia (IRIS)*, Finland, 8-10 August.

Swart, J. (2006). 'Intellectual Capital: Disentangling an Enigmatic Concept', *Journal of Intellectual Capital*, 7(2), pp. 136-159.

Swart, J. and Kinnie, N. (2004). *Managing the Careers of Professional Knowledge Workers*, London: Chartered Institute of Personnel and Development.

Swart, J. and Kinnie, N. (2007). 'Simultaneity of Learning Orientations in a Marketing Agency', *Management Learning*, 38(3), pp. 337-357.

Swart, J., Kinnie, N. and Purcell, J. (2003). *People and Performance in Knowledge Intensive Firms*, London: Chartered Institute of Personnel and Development.

Tallman, S., Jenkins, M., Henry, N. and Pinch, S. (2004). 'Knowledge, clusters, and competitive advantage', *Academy of Management Review*, 29(2), pp. 258-271.

Tetrick, L. E. and LaRocco, J. M. (1987). 'Understanding, prediction, and control as moderators of the relationship between perceived stress, satisfaction, and psychological well being', *Journal of Applied Psychology*, 72(4), pp. 538-543.

Thagard, P. (2002). 'Empiricism, realism, and religion', *Science*, 298, pp. 971.

Thompson, M. and Heron, P. (2002). 'The employment relationship and knowledge creation: evidence from R&D based high technology firms', paper presented at *the EURAM Conference*, Stockholm, 1-10 May.

Truss, C. (2001). 'Complexities and controversies in linking HRM with organizational outcomes', *Journal of Management Studies*, 38(8), pp. 1121-1149.

Tsoukas, H. (1996). 'The firm as a distributed knowledge system: a constructionist approach', *Strategic Management Journal*, 17 (1), pp. 11-25.

Tsui, A., Pearce, J., Porter, L. and Tripoli, A. (1997). 'Alternative approaches to employee-organization relationship', *Academy of Management Journal*, 40(5), pp. 1089-1121.

Tyson, S. (1997). 'Human resource strategy: a process for managing the contribution of HRM to organizational performance', *The International Journal of Human Resource Management*, 8(3), pp. 277-290.

U.S. Bureau of Labor Statistics .(2000). 'Standard occupational classification system'.

Valcour, P.M. and Snell, S.A. (2002). 'The boundaryless career and work force flexibility: developing human and social capital for organisational and individual advantage', paper presented at *the 2002 Annual Meeting of the Academy of Management*, Denver, CO.

- Van Dyne, L., Graham, J.W. and Dienesch, R. M. (1994). 'Organizational Citizenship Behavior: Construct Redefinition, Measurement, and Validation', *Academy of Management Journal*, 37(4), pp. 765-802.
- Vandenberg, R.J. and Lance, C.E. (1992). 'Examining the Causal Order of Job Satisfaction and Organizational Commitment', *Journal of Management*, 18(1), pp. 153-167.
- Vogt, E. (1995). 'The nature of work in 2010', *Telecommunications*, 29, pp. 21-27.
- Wagner, J. (1995). 'Studies of individualism-collectivism: Effects of cooperation in groups', *Academy of Management Journal*, 38, pp. 152-172.
- Wallace, J. (1995). 'Organizational and professional commitment in professional and nonprofessional organizations', *Administrative Science Quarterly*, 40(2), pp. 228-255.
- Walsh, J. P. and Ungson, G.R. (1991). 'Organizational Memory', *Academy of Management Review* 16(3), pp. 57-91.
- Wayne, S. J., Shore. M. and Liden. R. C. (1997). 'Perceived organizational support and leader-member exchange: a social exchange perspective', *Academy of Management Journal*, 40, pp. 82-111.
- Whitener, E. M. (2001). 'Do "high commitment" human resource practices affect employee commitment? A cross-level analysis using hierarchical linear modeling', *Journal of Management*, 27 (5), pp. 515-535.
- Whitley, B. E. (1996). *Principals of Research in Behavioral Science*, London: Mayfield.

Wood, S.J. and de Menezes, L. (1998). 'High commitment management in the UK: Evidence from the Workplace Industrial Relations Survey and Employers' Manpower and Skills Practices Survey', *Human Relations*, 51(4), pp. 485-515.

Wright, P.M. and Boswell, W.R. (2002). 'Desegregating HRM: a review and synthesis of micro and macro human resource management research', *Journal of Management*, 28(3), pp. 247-276.

Wright, P.M., Gardner, T.M. and Moynihan, L.M. (2003). 'The impact of HR practices on the performance of business units', *Human Resource Management Journal*, 13(3), pp. 21-36.

Wright, P. M. and Kehoe, R. (2008). 'Human resource practices and organizational commitment: A deeper examination', *Asia Pacific Journal of Human Resources*, 46 (1), pp. 6-20.

Wright, P. and Nishii, L. (2004). 'Strategic HRM and organizational behaviour: integrating multiple level analysis'. Paper presented at *the What Next For HRM? Conference*, Rotterdam, June.

Yin, R. K. (1993). *Applications of Case Study Research*, Newbury Park: Sage.

Yin, R. K. (1994). *Case Study Research*, London: Sage.

Yin, R. K. (1989). *Case study research: Design and methods*, Rev. ed., Newbury Park: Sage.

Yin, R. K. (2003). *Case Study Research Design and Methods*, 3rd ed., Thousand Oaks: Sage.

Youndt, M.A., and Snell, S.A. (2004). 'Human Resource Configurations, Intellectual Capital, and Organizational Performance', *Journal of Managerial Issues*, 16(3), pp. 337-360.

Youndt, M. A., Subramaniam, M., and Snell, S. A. (2004). 'Intellectual capital profiles: An examination of investments, and returns', *Journal of Management Studies*, 41(2), pp. 335-361.